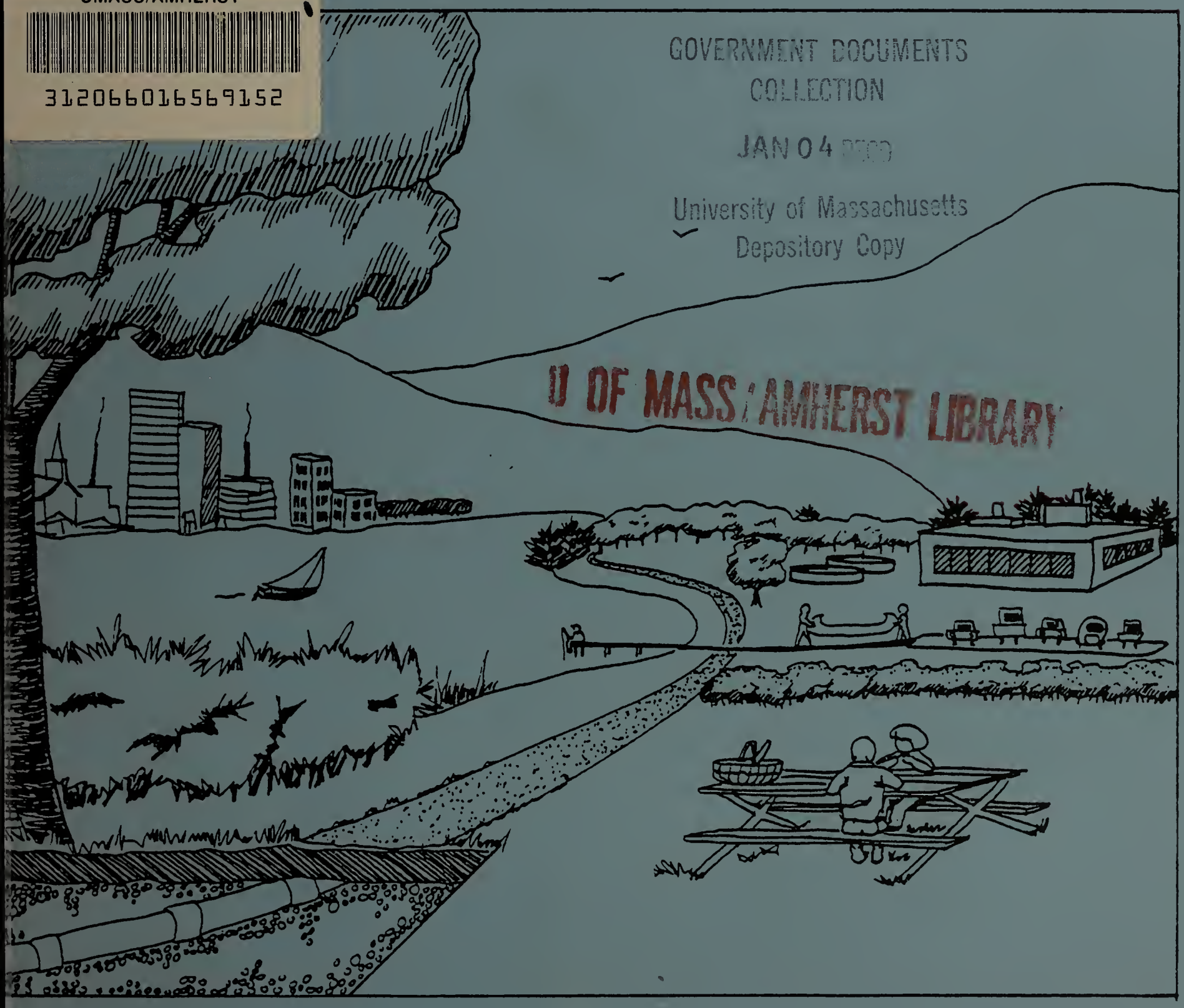
MASS.
DC. COL.
ASS.
A22.2:W28/2

WASTEWATER FACILITY PLANNING GUIDELINES:

RECREATION AND OPEN SPACE OPPORTUNITIES

UMASS/AMHERST
31206601656915 2



GOVERNMENT DOCUMENTS
COLLECTION
JAN 04
University of Massachusetts
Depository Copy
U OF MASS./AMHERST LIBRARY

MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL QUALITY ENGINEERING
DIVISION OF WATER POLLUTION CONTROL

Wastewater Facility Planning Guidelines

for

Assessing Recreation and Open Space Opportunities

by the

Massachusetts Department of Environmental Quality Engineering

Division of Water Pollution Control

201 Construction Grants Section

and the

208 Water Quality Planning Section

August, 1980

The preparation of this report was financed through a grant from the Environmental Protection Agency under the provisions of Section 208 of the Federal Water Pollution Control Act Amendments of 1977 (P.L. 92-500).

ANTHONY D. CORTESE
XXXXXXXXXXXXXXX
COMMISSIONER

The Commonwealth of Massachusetts

Executive Office of Environmental Affairs
Department of Environmental Quality Engineering
100 Cambridge Street, Boston 02202

July 30, 1980

Gentlemen/Ladies:

The clean-up of Massachusetts waters is making new open space and recreation opportunities possible. The 1977 Amendments to the Clean Water Act requires that potential recreation and open space opportunities, i.e., "multiple use" opportunities, be analyzed in the planning of proposed treatment works.

Through multiple use of a wastewater treatment facility and the site it occupies, a single public investment can serve several community needs. With current local energy and fiscal constraints, multiple use projects could provide needed recreation facilities close to home and often at a significant cost savings.

The Massachusetts Department of Environmental Quality Engineering's (DEQE's) Division of Water Pollution Control (DWPC) endorses this concept and has entered into a mutual agreement with the Environmental Protection Agency (EPA) to aid communities in availing themselves of this opportunity during the wastewater treatment facilities planning stage. Accordingly The Construction Grants Section of DWPC and the 208 Water Quality Management Section of DEQE prepared the enclosed Wastewater Facility Planning Guidlines: Recreation and Open Space Opportunities to assist you and your consultant in facilities planning.

The Guidelines give examples of typical projects and the probable extent of analysis required. The analysis will vary according to the type of the treatment works chosen and the complexity of the proposed project. Each project will vary in scope and should primarily reflect the communities level of interest in such planning opportunity.

The EPA and DEQE encourage planning for recreational and open space opportunities with wastewater treatment works. If your community has undertaken facilities planning subsequent to September 30, 1978, compliance with the recreational planning requirements of the 1977 Amendments is mandatory. Grantees with projects begun subsequent to this date are free to request a grant increase for additional money to carry out such recreational planning as long as the project is not delayed or the cost raised significantly. If your community began facilities planning prior to September 30, 1978 you may also request a grant increase, but the recreational planning is not mandatory.

Your consultant engineer should address previous recreational planning and programs on the Federal, State, Regional and local level in order to optimize possible recreational benefits to the community.

If you have any questions about the program feel free to contact The Massachusetts Division of Water Pollution Control Construction Grants Section at 617-727-3855.

Sincerely,

Anthony D. Cortese

Anthony D. Cortese, Sc.D.
Commissioner

df

Acknowledgements

This document was prepared as a part of the FY 80 State/EPA Agreement Issue "Recreation and Open Space Opportunities Associated With Wastewater Treatment Works".

State Project Managers: Suzanne Kilner, 208 Water Quality Planning Section Department of Environmental Quality Engineering

Richard Gioiosa, 201 Construction Grants Program, Division of Water Pollution Control

Federal Project Manager: Bart Hague, Environmental Protection Agency

Portions of this study were prepared under contract as follows:

Research on Design Guidelines: Northern Middlesex Area Planning Commission

Research on Legal, Institutional Funding Issues: Merrimack Valley Planning Commission

Appreciation for their assistance in developing the study content and reviewing initial drafts is expressed to:

Debra LeBlanc, Department of Environmental Management
Joel Lerner, Division of Conservation Services
Paul Mugford, Department of Fisheries Wildlife and Recreational Vehicles
Paul Pinault, Environmental Protection Agency
Susan Redlich, Department of Food and Agriculture
Rich Thibedeau, Coastal Zone Management Program

Cover Drawing: Cynthia O'Connell, Design Drawings: Mary Gene Myers, Edward McNeill

Typist: Diane Ferullo

Table of Contents

Introduction 1

Eligible Projects 1

Eligible Costs 1

- Facilities Planning (Step 1) 1
- Design and Construction (Steps 2 and 3) 2
- Differentiating Treatment Facility and Recreation Costs 3
- Bidding Procedures 3

Facilities Planning: Assessing Opportunities 5

- Plan of Study 5
- Assessing Alternatives 6
- Recommended Alternative 9
- Impact Assessment 9
- Demonstration of Coordination Measures 10

Legal and Institutional Issues 12

- Liabilities 12
- Easements 12
- Sewer Commission Charters 13
- Local Support and Organization 14
- Timing Multiple Funding Applications 14
- Management Agency 14

Recreation and Open Space Funding Sources 17

Design Guidelines 17

- Trails 19
- Landscaping 23
- Rest Areas 27
- Shoreline Access 27
- Accessories 29

Three Case Studies 31

References 37

Appendix A Information Sources A-1
Appendix B Sample Multiple Use Easement B-1
Appendix C Funding Sources C-1

Tables

Table 1 Timing and Coordination for Multiple Use Projects 15
Table 2 Existing Multiple Use Projects 18
Table 3 Multiple Use Funding Sources C-2

Introduction

Public facilities are being used for an ever increasing number of extra-curricular activities. School buildings open in the evening for adult education and community meetings, churches host nursery schools and theatre groups, tennis courts and skating rinks are frequently combined. A more recent innovation is the multiple use of wastewater treatment facilities for recreation, civic functions, and education. Public recreation and open space benefits are one of the major intents of Federal water pollution control laws whose goal is "fishable-swimmable" waters by 1983. To date the potential for these alternate uses of wastewater treatment facilities and the concurrent benefits of treatment have not been fully realized. Improved water quality due to proposed cleanup programs provides a wide range of potential recreational opportunities. Thus active measures to provide public access and to protect a shoreline setting appropriate to the planned water-uses should accompany water clean-up efforts. Consulting firms engaged by municipalities to aid in assessing the wastewater problems of their clients and recommending the most cost effective and environmentally appropriate solution will be performing a great service to the community by assuring that the project may also be more aesthetically pleasant. Public acceptance of the recommended wastewater project which incorporates recreation and open space may be more readily facilitated.

A linking of recreation and wastewater treatment projects may result in a considerable cost reduction over the cost of independent projects. A concerted effort is needed to coordinate federal, state and local agencies and funding sources in order to bring to fruition a multiple purpose project. The involvement of community groups is essential to gaining input as to the recreational needs of the community and in raising public interest and approval for the proposed project. Public participation is an essential phase in implementing the recreation and open space project just as it is for the proposed treatment works.

Eligible Projects

A description of potential opportunities for recreation, open space and access to bodies of water is required for all facilities planning initiated after September 30, 1978, whether or not prepared under a Step 1 Grant. Grantees with ongoing projects (initiated prior to the above date) are encouraged to undertake recreation and open space planning as a part of the project and, in fact, may request grant amendments for extra money to carry out such planning if it will not delay projects or raise costs significantly.

Eligible Costs

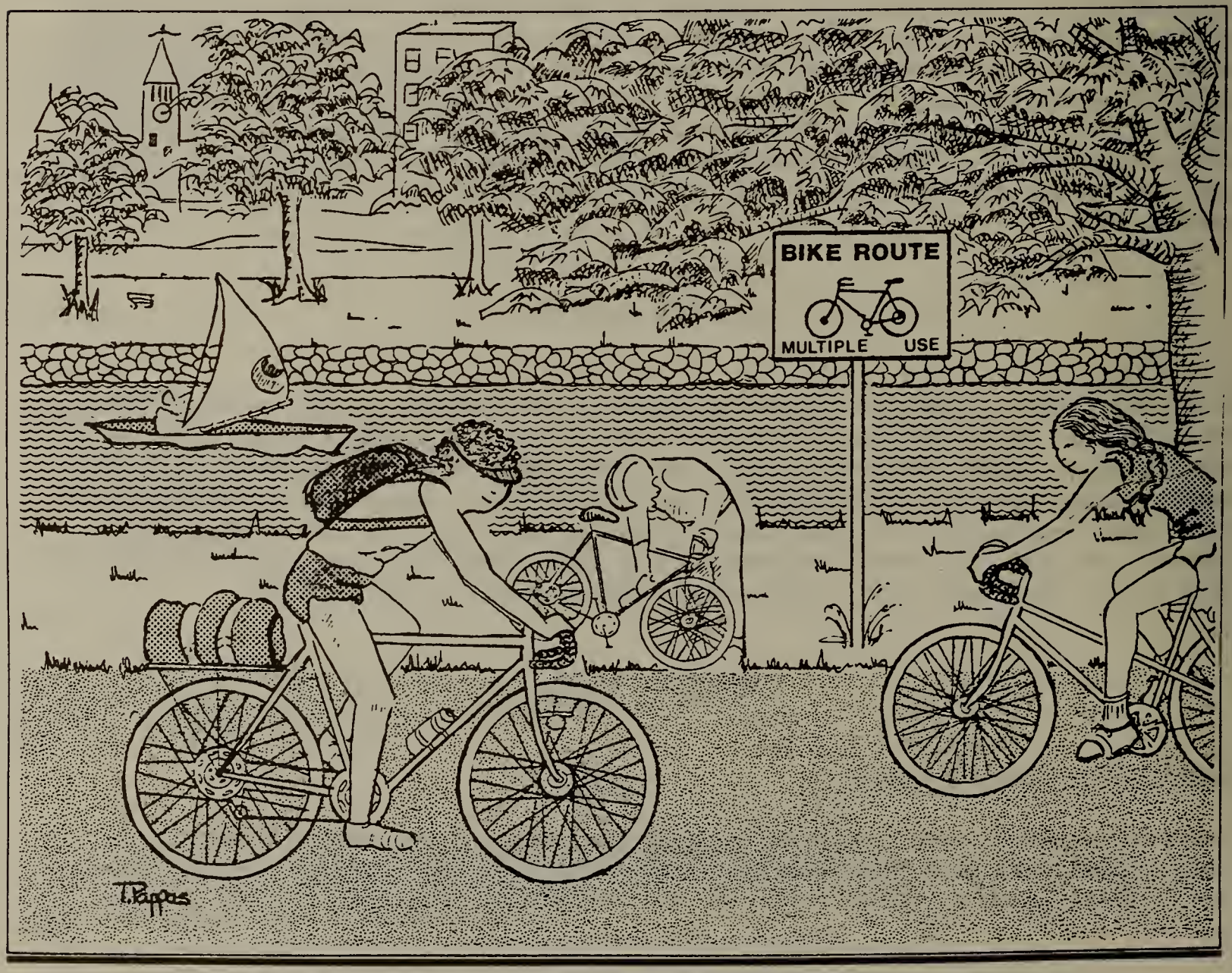
Facilities Planning (Step 1)

Costs associated with assessing recreation and open space opportunities in conjunction with the treatment works alternatives are eligible costs. Among the stated above eligible costs are the consultant's time in meeting with

recreation officials, conservation commissions and civic organizations; identifying opportunities; incorporating recreation/open space recommendations into alignment and design considerations; differentiating facility and recreation component costs; and incorporating management considerations into the project financing and management arrangements. The town must assume responsibility for negotiating additional easement rights (see Appendix B).

Design and Construction (Steps 2 and 3)

Only the Recreation and Open Space planning costs are eligible for 201 funding. Design and construction costs are not grant-eligible under steps 2 and 3. However if a Grantee is able to incorporate a viable multiple purpose use in conjunction with the recommended treatment system's construction, then funding for the recreational purpose will be eligible up to the allowable cost for restoration of the site for the wastewater system alone. The interceptor system along the Merrimack River in Lowell, Massachusetts illustrates how the bidding procedure was incorporated to provide a recreational benefit at no additional cost to the community. One alternative was to entirely riprap the river bank along the interceptor. The other alternative substituted a paved surface for one half of the 20 foot wide riprap shelf and included a simple railing. Both alternatives were bid at the same price. The bikeway/walkway alternative is being built and will provide numerous recreational benefits to the City of Lowell (see the Case Examples for a description of this project).



Should a multiple purpose option be bid at a higher price, the cost over and above the cost of the wastewater system alternative alone will have to be borne by the affected community and/or through an available recreational grant.

Differentiating Treatment Facility and Recreation Costs

The current EPA and Division of Water Pollution Control policy in funding multiple-purpose projects which include recreation is to fund at the level of the most cost-effective single-purpose pollution control project. Cost associated with the design and construction of the recreational components are not eligible for construction grants money. These costs have to be borne by the grantee in addition to their share of the water pollution control project.

The cost of the single-purpose pollution control project should include the cost of normal restoration of the site to near original conditions in the case of an interceptor and to aesthetically blend the site and structures into the landscape in the case of a pumping station or treatment plant. For interceptors the types of planting would differ in fields, forests, wetlands and developed areas. Special provisions are made to prevent erosion. Access for maintenance and barriers preventing unauthorized access are also included. For treatment plants and pump stations, normal restoration would include similar access provisions, fencing as needed, a buffer zone, and any trees or shrubbery deemed appropriate. EPA and DWPC review all plans prior to approval to ensure that site restoration is adequate.

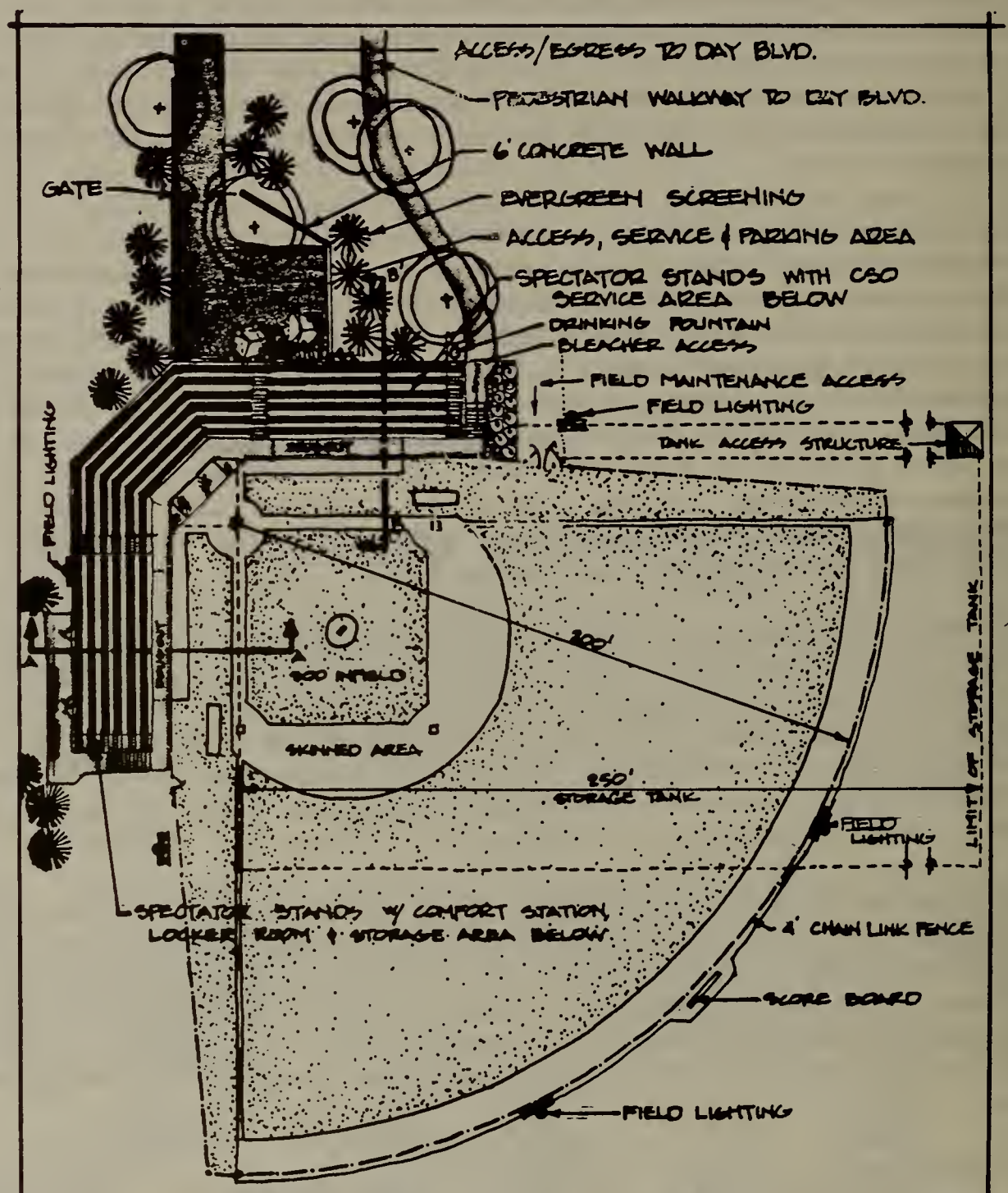
In addition to normal site restoration under EPA's 201 program, a variety of mitigation costs have been ruled eligible project costs in Federal project history. Under the Fish and Wildlife Coordination Act, for example a Federal project must bear the cost of acquiring and developing substitute habitat to offset that destroyed or impaired by the project. The National Environmental Policy Act also provides a statutary basis for mitigation expenditures to offset the full spectrum of potential environmental damages.

It should be noted that the funding policy for projects that combine water pollution control with recreation/open space is dissimilar from the policy for funding other types of multiple-purpose projects. The Alternative Justifiable Expenditure (AJE) method for cost sharing as outlined in Program Requirements Memorandum 77-4 has been used to allocate costs for multiple-purpose projects. This method does not apply to multiple-purpose projects involving recreational elements.

Bidding Procedures

The consultants preparing the proposal for bids should make allowance for alternative bid items; one for the project with the recreational option and the other with normal site restoration. In this way if there is a cost differential and the multi-purpose project for the accepted low bidder is higher than the single purpose pollution control project, the differential would be funded by the grantee. Ineligible items would also be funded by the grantee.

AN OPPORTUNITY FOR ROOF TOP DEVELOPMENT



JUNIOR LEAGUE FIELD CONCEPT

FOR POTENTIAL RECREATIONAL USE OF A CSO FACILITY

SCALE: 1"=40'-0"

environmental engineers scientists planners & management consultants **CDM**

Facility Planning

Plan of Study

An approved Plan of Study (POS) is required prior to beginning a Facility Plan. The POS is a brief description of the scope, schedule and costs of the proposed facility plan. Recreation and Open Space planning must also be addressed in the POS. The following is a list of items normally required in the POS which should be expanded to include Recreation and Open Space planning:

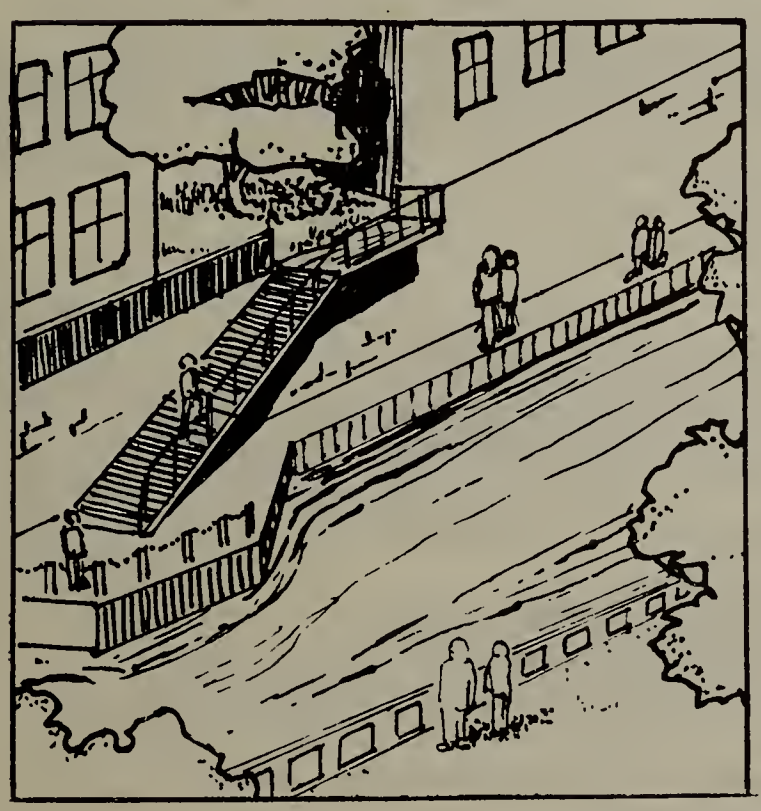
a. A map or maps showing the planning area; the SMSA; boundaries of political jurisdictions; boundaries of streams, lakes, water impoundments and water basins; the service areas of existing waste treatment systems; and any recreation, open space, conservation land, agricultural lands and wetlands.

b. A list of the responsible planning organizations and agreements or resolutions for conducting joint planning. This will include all conservation and recreational groups/on a municipal, county, regional, state and federal level also private groups. See the section on Coordination Measures (p. 10) for a list of appropriate agencies.

c. Describe data, plans and other information available to assist with facility planning. State what sources of information will be used for Recreation and Open Space planning (see Appendix A).

d. Include Recreation and Open Space planning in the schedule for completion of the specific tasks necessary to prepare the facility plan.

e. Estimate the cost for each task and the total costs for the Facilities Plan. Tasks associated with the Recreation and Open Space planning function should be identified.



Source: N.Y. Department of Environmental Conservation, Hudson River Basin Water & Related Land Resources Study Technical Paper 4, October, 1978, p. 59.

Assessing Alternatives

Once the alternative site selections (be they for collection or treatment) are defined, each should be assessed for its recreation and open-space potential.

The analysis should include a brief description of:

1. physical features and size of site
2. accessibility by road or mass transit
3. terrain limitations, including access barriers
4. improved water quality expected as a result of the proposed treatment system and suitability of currents, temperature, turbidity, etc., for various types of recreation
5. direction of prevailing winds and sources of odor
6. compatibility with surrounding land uses
7. recreation and open space opportunities compatible with the site
8. potential user groups
9. potential linkages with adjacent or other recreation areas

This latter factor should be determined by inventorying existing and proposed publicly and semi-publicly-owned lands (including schools), existing or proposed recreation facilities, and critical areas proposed for and/or needing protection (See Appendix A).

This analysis can be of a preliminary nature. It should be based on existing data or observation of the sites and should not require extensive new data collection or surveys for final analysis of suitability.

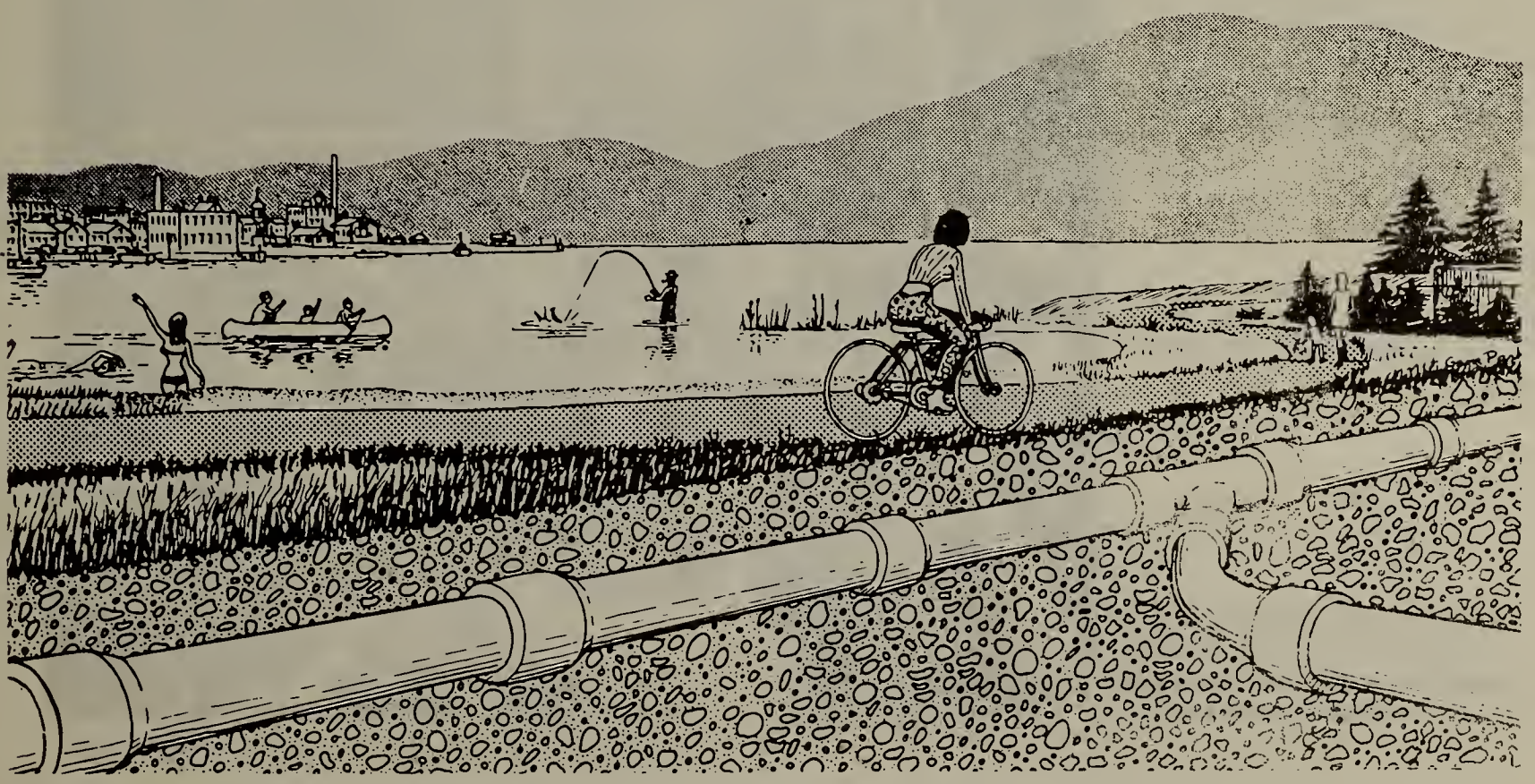
Certain Step 1 projects, due to the nature of the project, may permit a specialized or more focused recreation and open space analysis. These projects should include, but not be limited to, an assessment of the following:

Project Type	Assessment
Combined Sewer Overflow	Potential of the existing as well as the proposed alternative pipeline routes for trails and potential of the treatment facilities.
Extension or replacement of an interceptor and/or force main	Potential of the existing as well as the proposed alternative pipeline routes and pump station sites. Possible linkages with existing trail systems or other pipelines should be mentioned.

Project Type	Assessment
Sludge and Septage Facilities	If used for reclamation, future uses of site should be mentioned.
Septic Tank Rehabilitation	Open space analysis should consider how protective zoning and easements could also meet objectives of river or lakeshore greenbelt plans.
Laterals	No assessment required if under streets, but should be assessed where they traverse public or dedicated lands, follow small streams or interconnect neighborhoods
Industrial Survey	No assessment required

If the site is unsuitable for recreation this should be stated and justified (e.g. streets are not suitable for bikepaths, however, the shoulders may be suitable if the proposed pipeline is placed there).

Tools such as a matrix evaluating poor, fair, good and excellent potential may be appropriate. The results of this analysis should be factored into the selection of a final alternative and the plan should indicate what weight the recreation potential had in selection of the recommended alternative. In this way the final selection of a pipeline path may hinge upon the recreational opportunity if the alternatives were otherwise rated closely.



ANNE S. TOWNSEND PHOTO

Treatment tank supports two tennis courts.

WASHINGTON SUBURBAN SANITARY COMMISSION PHOTO

The Washington Suburban Sanitary Commission uses volunteers to conduct environmental education sessions at its wastewater treatment facilities.

Recommended Alternative

The evaluation and description of the selected treatment system and site should include the recreation/open space potential. This description should include a brief statement of:

1. compatibility of the proposed recreation or open space use with the site (topography, soils, drainage, flooding characteristics, etc.)

2. location of recreation use on site (include a sketch map), need for additional land

3. proposed public access including parking

4. possible need for fencing, surfacing, lighting and other initial design considerations

5. necessary or desirable modifications to treatment or collection facility to promote recreation/open space use

6. consistency with state and community recreation and open space goals and objectives; linkages with other facilities

7. potential funding for recreation/open space portion for purchase, lease, easement, ordinances, etc. (see section on funding sources)

8. clear differentiation of facility and recreation components, including costing of each

9. management needs and appropriate management agencies (e.g. division of responsibilities between park and sewer authorities) including safety liability and insurance protection

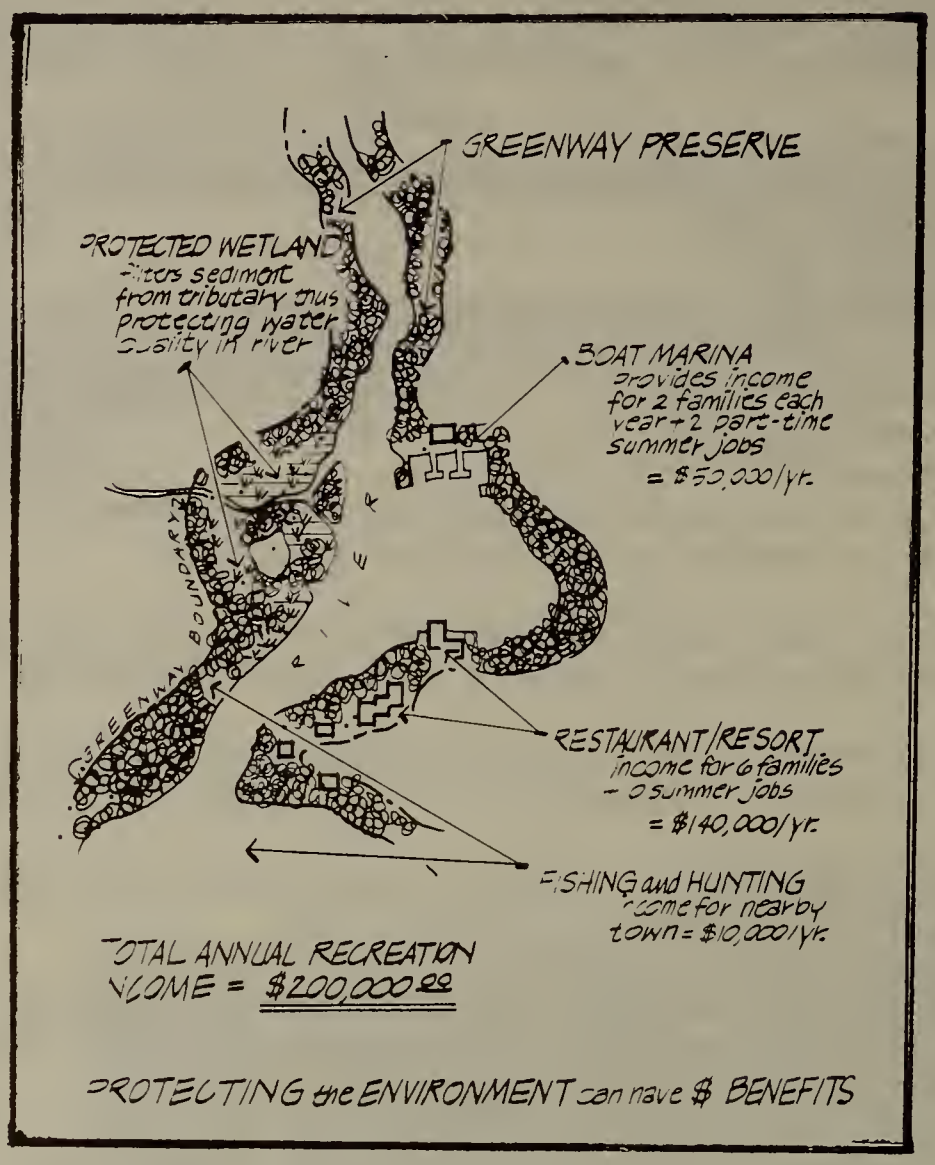
10. recreation/open space benefits as well as water quality benefits from the project

Impact Analysis

An evaluation of the impacts of the proposed project on recreation and open space lands is required as a part of the Environmental Information Document. An assessment of the environmental, social and economic impacts of the recreational components should be included in the facilities plan.

Of particular importance is that any primary and secondary impacts on agricultural lands be addressed since prime croplands are an especially important and vulnerable type of open space. This includes direct, immediate effects, such as interference with soils of a particular field, and indirect influences such as the economic pressure to develop agricultural lands once an interceptor line is placed alongside them; and changes in farmland drainage. Possible improvement or degradation of croplands used for application of wastewater and sludge should also be carefully considered.

Any positive or negative impacts specifically attributable to the recreation components should also be noted, such as effects on traffic, noise, energy use, cost savings from multiple use, income generated, etc.


GREENWAY PRESERVE
PROTECTED WETLAND
-filters sediment from tributary thus protecting water quality in river
BOAT MARINA
provides income for 2 families each year + 2 part-time summer jobs
= $50,000/yr.
GREENWAY BOUNDARY
RIVER
RESTAURANT/RESORT
income for 6 families
+ 0 summer jobs
= $140,000/yr.
FISHING and HUNTING
income for nearby town = $10,000/yr.
TOTAL ANNUAL RECREATION INCOME = $200,000 ea
PROTECTING the ENVIRONMENT can have $ BENEFITS

Coordination Measures

The recreation open space analysis should record coordination with State, regional and local recreation programs and with the recreational elements of area-wide quality management (208) plans. Appropriate agencies include:

1. local conservation commissions, park and recreation agencies, planning boards, and school committees;

2. watershed associations or lake associations;

3. regional planning agencies, including the water quality management program manager;

4. state recreation agencies including the Department of Environmental Mangement responsible for the State Comprehensive Outdoor Recreation Plan (SCORP), the Metropolitan District Commission (where applicable), the Division of Fisheries and Wildlife (where appropriate);

5. the Mass. Division of Water Pollution Control Construction Grants;

6. agencies administering State/Federal grants for recreation and open space (see funding chart in later section); and

7. The public: local officials, citizen groups, advisory groups formed as required by Part 25 and Part 35 of the construction grant regulations.

These groups should all be involved in identifying opportunities early in the facility planning process.

NEW OUTFALL
OLD RACE
NARROW BOARDWALK PASSES BY SUBTATION and UNDER BRIDGE TO EXTEND GREENWAY, PEDESTRIAN BIKEWAY
OLD POWER HOUSE CONVERTED TO A SUBSTATION
BIKEWAY
HURON RIVER

Ann Arbor Huron River Greenway

Legal and Institutional Issues

Liabilities

Easement acquisition, whether for a sewer line or recreational use, is the responsibility of the Grantee. A drawback to implementation of the recreational portion of the project is that private landowners often express a reluctance to grant public access to their land for recreational purposes. Such access is often needed for a trail over a pipeline or access to the water. Some commonly expressed fears are that they will be financially liable for a person injured while using the multiple use facility on their property and that their insurance premiums will increase as a result.

According to Massachusetts General Laws Ch.21, S.17C, a private landowner (individual or corporation) who permits public use of private property is not liable unless he accepts cash payments for user fees or in case of willful or wanton conduct on his part. He may receive a tax break or even direct cash payment for the easement and still be covered by C.21, S.17B.

Additional protection could be secured by writing into the easement that the municipality would assume liability. On public lands the municipality is liable as with any other publicly owned lands.

Most homeowners and corporations are already covered by their insurance policies for liability as well as for the cost of the defense in the case of a lawsuit. By allowing public access to their property, little or no additional expense for coverage should be expected as the owner would be absolved from liability as explained above.

Municipalities generally will either fund their own liabilities through a general fund or special appropriation or will purchase insurance coverage for catastrophic situations. In most cases the addition of several trail easements or small multiple use facilities should have little effect on the overall costs for coverage.

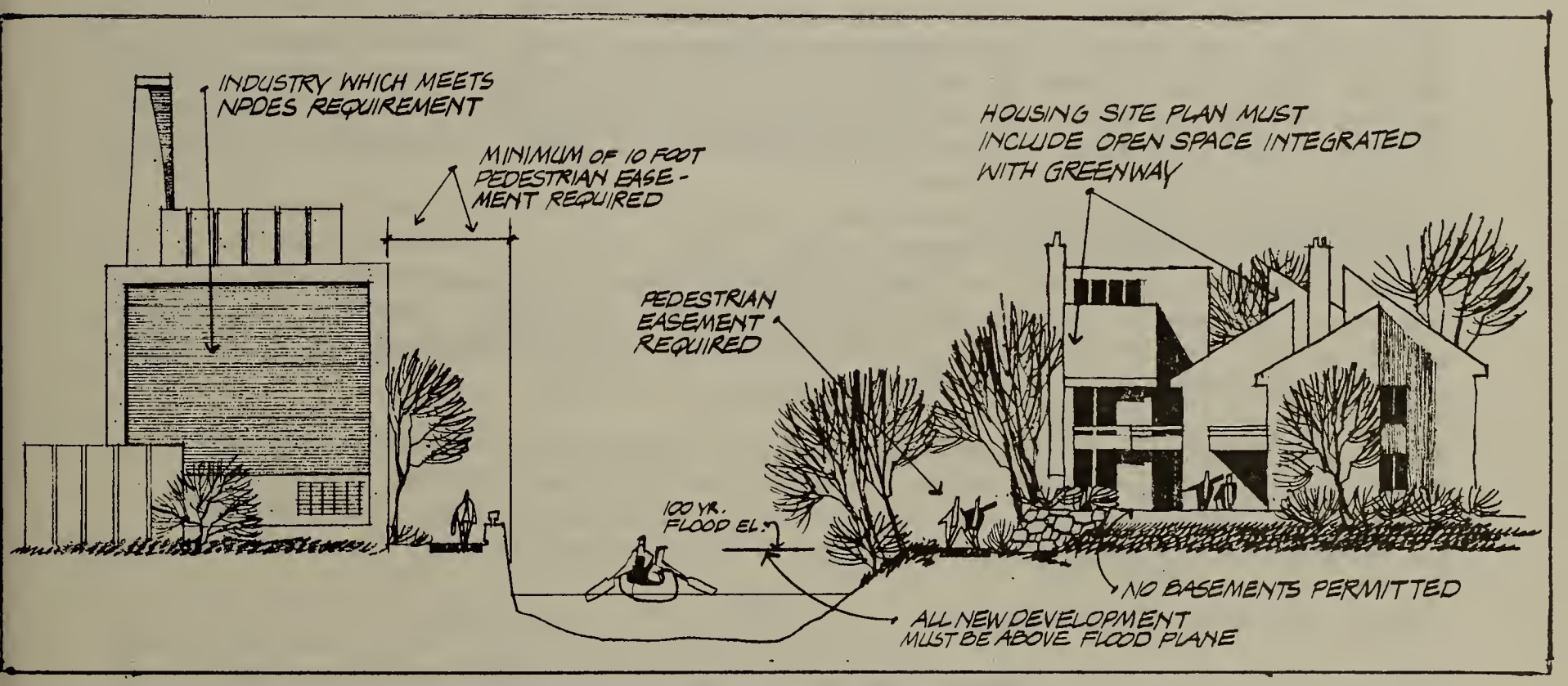
Easements

As stated previously, obtaining the necessary lands and easements for a wastewater treatment project is a local responsibility, a prerequisite prior to construction. The applicant's (municipality, etc.) attorney must certify to EPA that title has been obtained to the necessary lands and easements.

A multiple-use easement should specify both what public uses will be allowed and what rights the landowner wishes to retain. A sample multiple use easement for a foot path over a sewer line may include the following stipulations: (1) exclusion of motorized vehicles except for emergency service and security purposes, (2) the Conservation Foundation can improve and landscape the trail, (3) the public has access to the footpath, (4) the landowner has no obligation for repairing, maintaining or providing protection for the trail and agrees not to build any structures across it, (5) the multiple use easement is granted in addition to a previously granted sewer easement (see Appendix B for a sample easement).

In addition to sewer easements, other types of easements and rights such as flowage rights, mill rights, flood management rights, and encroachment lines may be used conjunctively to derive greater recreation, open space and scenic benefits. Possibilities should be explored for taking advantage of access established through use over the years. Under English Common Law, the public has the right of access to "Great Ponds", ponds of 10 acres or larger. These rights were conveyed in the colonial charter under which Maine and Massachusetts were established.

Easements


INDUSTRY WHICH MEETS NPDES REQUIREMENT
MINIMUM OF 10 FOOT PEDESTRIAN EASEMENT REQUIRED
HOUSING SITE PLAN MUST INCLUDE OPEN SPACE INTEGRATED WITH GREENWAY
PEDESTRIAN EASEMENT REQUIRED
100 YR. FLOOD EL.
NO BASEMENTS PERMITTED
ALL NEW DEVELOPMENT MUST BE ABOVE FLOOD PLANE

Source: EPA, The Public Benefits of Cleaned Water: Emerging Greenway Opportunities, p.8

Sewer Commission Charters

Although charters of public bodies establish the legal right to acquire lands and easements, they differ widely on the purpose or uses for which these rights may be acquired, especially if the power of eminent domain may be invoked. A sewer district charter, for example, may enable the district to acquire easements for the construction, installation, and maintenance of a sewer, but not for other purposes such as recreation access. This right resides in the park and recreation agency. In such a case, the two public agencies would have to be alerted early in the planning and

Negotiation; so they could cooperate in complementing each other's authority to acquire all the rights required for a sewer easement with public access. In these cases easements will have to be negotiated jointly, security and maintenance provisions coordinated, and contracts issued jointly so that construction activities can be coordinated.

Local Support and Organization

In order for multiple-use projects to succeed a local support group will be necessary to keep the project moving and force speedy resolution of administrative conflicts. Watershed Associations, Conservation Commissions, Chambers of Commerce, Neighborhood Associations and local officials can provide the impetus for a multiple-use project and the persistence to see it through. Most projects span a number of years from the planning phase to eventual construction. Multiple-use projects should not increase this time frame, but will require a substained involvement throughout all phases of the project, and especially during the following: early consultations, initial facilities planning, submittal of recreation funding applications, project design appraisal negotiations and site acquisition. Some of the costs of public participation in facilities planning are grant eligible.

Large scale or controversial wastewater projects may require the formation of an advisory committee in order to have input into the planning effort, identify issues and assist in resolving conflicts. In the planning stage the committee may be funded as a part of the 201 Facilities Planning public participation requirement. Once the Facilities Plan is approved, it will need to seek other sources of funds.

The committee will need to stimulate public interest and maintain progressive input and momentum throughout the project in order to gain community acceptance, overcome potential or procedural problems, and see the project to fruitation. A dedicated and effective core leadership will be essential.

Timing of Funding Applications

If the town is seeking outside funding for the recreation portion of the multiple use project, applications for the two different programs will need to proceed so that the planning, design and construction activities progress coterminously. The Facilities Plan should include preliminary site sketches and cost estimates as required by the recreation agency for future planning and design. An attempt should be made by the consulting engineering firm preparing the Facilities Plan for the grantee to coordinate functions in order to meet recreation application deadlines. Both the recreation and the sewer funding should be appropriated at the same town meeting, whenever possible. Table 1 identifies the critical points at which the wastewater facilities and recreation funding cycles must be coordinated.

Management Agency

Ultimately, an agency that will be responsible for the completed multiple-use project must be identified. The agency could be a branch of county government, a regional group of communities acting cooperatively, or a non-profit citizens' organization. For example, a Sanitary District could assume the management of a multiple-use project for its participating communities. Sanitary districts could own property and hold easements for bo

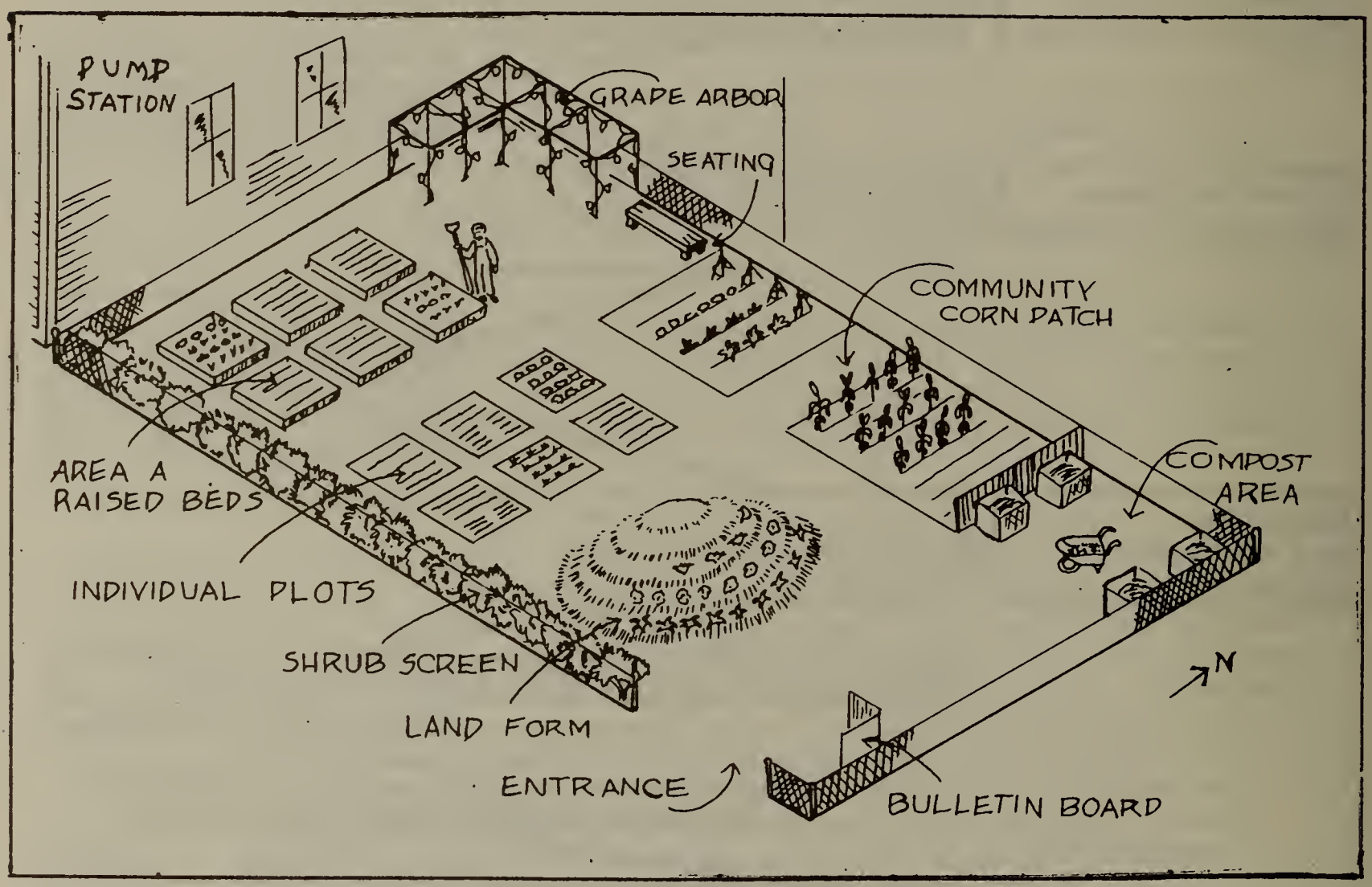
TABLE 1

TIMING AND COORDINATION FOR MULTIPLE USE PROJECTS
(Recreation/Open Space and Wastewater Treatment)

INPUT FROM LOCAL RECREATION AND OPEN SPACE INTEREST GROUPS	CONSTRUCTION GRANTS 201 FUNDING PROGRAM	COORDINATION WITH RECREATION FUNDINGS PROGRAMS
	Pre-application conference with community and/or consultant	
Scope of recreation planning defined	Plan of Study Step 1 Grant Application Submitted by Consultant	
Participation in advisory committee or direct input	Facilities Planning begun after grant approval; alternatives assessment made	
		Consider R/OS funding program's requirements
Review and comments	Draft Facility Plan public meeting held on alternatives	
		Incorporate R/OS planning objectives with recommended wastewater treatment solution
Endorsement of plan and management agency	Facility Plan completed public hearing for final acceptance	
	Step 2 application (Design)	Recreation funding application for design
	Design of multiple use project	
	Step 3 application (construction)	Recreation fund application for construction
	Construction of multiple use project	

its wastewater treatment and recreation facilities. Alternatively a recreation agency or semi-public agency could assume responsibility for the recreation facilities.

Examples of multiple-use programs in other states suggest that the involved communities assume responsibility for that part of the project within their own jurisdiction. This is recommended to best assure long-term commitment to maintaining the multiple use facility, protecting nearby landowners, and providing adequate liability coverage. A regular program of maintenance and safety can be established as part of existing community services since existing insurance policies often already provide liability coverage for the community. Individual communities will ideally adopt facilities plans containing multiple-use planning and incorporate them into their master plans, demonstrating a long term commitment to operating and maintaining these facilities.



Community Gardens

Source: Mass. Department of Food & Agriculture, The Downtown Farmer, Spring, 1979, p. 24.

Recreation and Open Space Funding Sources

If the cost of the recreation and open space components of the multiple use project clearly exceed the comparable single-purpose cost for the project as explained in the section on eligible costs, then the municipality, agency, corporation or individual may seek additional funding assistance.

Appendix C supplies information on funding sources for the recreation open/space program. It includes the funding level for the program, the local match required and whether other funds can be used as a match as well as the application deadlines, date of grant awards and an agency contact person. This should assist the town in selecting an appropriate funding source and coordinating the two programs.

The facilities plan should specify which funding sources may be appropriate to the specific type of multiple use project, whether the project meets the program's funding criteria and a proposed schedule for coordinating the two. The cost breakdown should also clearly specify the components to be paid for by the 201 funds and those which may qualify for recreation funds as well as the corresponding local shares for each. A general description of each funding program follows Table 3 in Appendix C.

Design Guidelines

This section is not intended to be a comprehensive guide to park planning and design. It is intended to contribute to a common vocabulary among those engaged in planning multiple use facilities, and to show minimum dimensions of some common recreational facilities.

The guide is not, in any way, intended to limit the types of uses or innovative ideas that should be considered as part of wastewater treatment facility planning. Each project will present unique problems and opportunities in terms of physical design and social considerations that will require a professional sensitive to the relationship between the land and its use. It is hoped the chart of implemented examples of these facilities on the following page (Table 2) will serve as inspiration for further innovation in the design of these structures for varied recreational use.

It is worth emphasizing that recreation included with treatment works can be simple and relatively inexpensive. The cost will vary according to the types and design of the recreational component which the involved community desires. Trails may range from a simple, well graded dirt trail to a paved bicycle trail; stream crossings may be a few rocks or a walkway bridge; boat launches may be a layer of gravel for canoes or a paved launch for boats on trailers; and even parking may be a cleared area for 5 cars or a 20-50 car paved and landscaped parking lot.

For those who would like more information, a list of easy-to-use and interesting design manuals is included in the reference section. In addition to being reliable guides, they can also stimulate the creation of innovative and imaginative multiple use facilities.

TABLE 2

EXISTING MULTIPLE USE PROJECTS

ACTIVITY TYPE	WASTEWATER TREATMENT (WWT) FACILITY TYPE	WHERE	OWNER OR FUNDING AGENCY
Approx. 10 miles of hiking/ biking trails in park.	Interceptor pipe	Washington Suburban Sanitary Commission (WSSC) Maryland	WSSC and Maryland National Capital Park & Planning Commission. PUBLIC
Bike paths, hiking trails - 13 miles	Interceptor pipe	Towpath Trail Morris County, New Jersey	PUBLIC
Bike path, hiking trails. Connects historical sites and recreational areas.	Partially on interceptor pipe	Patriots Path Whippany River, New Jersey	PUBLIC
Three mile bikeway.	Interceptor on abandoned RR service line installed under existing linear recreational facility.	Peabody, Mass.	EPA funded sewer and restored cinder bikepath as part of contract.
Tennis Courts	Roof of sludge digester	Evergreen, Colo.	Private tennis club PRIVATE
Bleachers for neighboring hockey rink	Bleachers form part of pumping station	Barrington, R.I.	
Fishing Pier	Supports treated water outfall pipe extending ½ mile out to sea	Pacifica, Calif.	EPA/Heritage and Cultural Resources Service
Park with fishing pier and sculpture garden of artifacts unearthed during construction	Land for future expansion next to WWT plant.	Tallman Island Queens, N.Y.	
Community gardens and canoe launch. Star watching facility.	Buffer land around WWT facility on DuPage River	Naperville, Ill.	Naperville Park District
Courts, swimming pool, adventure playground. Bikeway connects to Great Miami River.	Recycled WWT plant.	Westover Park Miamisburg, Ohio	
Education. Elevated walkways in plant with explanatory displays	WWT plant.	Shenandoah National Park, Virginia	National Park Service

- Friends of the Towpath Trail
  (Rockaway River)
  Box 247
  Boonton, New Jersey 07005

- The Friends of Patriots' Path
  New Jersey Conservation Foundation
  300 Mendham Road
  Morristown, New Jersey 07960

- City of Peabody, Mass.
  EPA Project No.: C250277-01
  Engineer: Green International Affiliates
  625 McGrath Highway
  Boston, MA 02145

- Evergreen Metropolitan District
  Evergreen, Colorado 80439

- Barrington, R.I. Pumping Station
  Engineer: Camp Dresser McKee Inc.
  1 Center Plaza
  Boston, MA 02108

- Tallman Island, Queens, New York
  Engineer: Camp Dresser McKee Inc.
  1 Center Plaza
  Boston, MA 02108

- City of Naperville
  305 West Jackson Avenue
  Naperville, Illinois 60540

- Miamisburg Conservancy District
  Miamisburg, Ohio 45342

- National Park Service
  Shenandoah National Park
  Luray, Virginia 22835

TRAILS

Route Selection:

Generally speaking, good routes for sewer mains and interceptors will also be developable as hiking or biking trails. Most sewer systems are gravity flow and, if traveling cross-country, follow the natural drainage pattern frequently running alongside a stream. Walking trails are comfortable if their average grade is approximately ten percent. Fifteen percent is considered to be rather steep. Bikers prefer flatter grades -- five percent is a useful average over the route. If much of the terrain is steeper than ten percent, extra rest areas should be considered.

Soil conditions as well as the steepness of the slope should be considered in the selection and evaluation of trail routes. The following chart offers general information concerning soils and slopes.

SUMMARY SOIL INDICATORS FOR EVALUATION OF A PROPOSED TRAIL INSTALLATION

Conditions	Conditions Posing Slight Limitations for Trail Installations	Conditions Posing Moderate Limitations for Trail Installations	Conditions Posing Severe Limitations for Trail Installations
Soil Wetness	Depth to seasonal high water table four feet or more; well drained to moderately well drained	Depth to seasonal high water table one to four feet; excessively drained	Depth to seasonal High water table less than one foot; poorly drained
Soil Texture	Particle mixture of sand, clay, silt; 20-50% of content gravel	High sand content; less than 50% but greater than 20% of content gravel	High clay content; no gravel
Soil Structure			Hardpans less than one foot from soil surface; peaty, muck soils
Soil Depth to Bedrock	Greater than three feet	1.5 - 3 feet	Less than 1.5 feet
Slope	0 - 5%*	5 - 20%	Greater than 20%

*Slope is the number of feet of vertical rise per one hundred feet of horizontal distance, expressed as a percentage--that is, a 10% slope rises ten feet vertically for every hundred feet traversed horizontally.

Source: Robert D. Proudman, AMC Field Guide to Trail Building and Maintenance, (Appalachian Mountain Club, 1977), p. 23.

Although it is discouraged by federal, State, and local agencies and authorities, pipelines are sometimes routed through wetlands. Wetland sections of line are not suitable for hiking or biking trails unless they are bridged.

It is important to remember in choosing between routes, and in subsequently detailing the selected route that the trail and the pipe do not have to run together at all times. The pipe provides an opportunity for a trail--it does not limit it. Either can proceed independently for yards or even miles. The trail may swing free to link a park or school, the pipe may short cut through private property or land otherwise unsuitable for biking or walking. Recognizing such partial independence may minimize apparently insurmountable obstacles in route planning.

The trail may part company with the pipe for a variety of reasons.

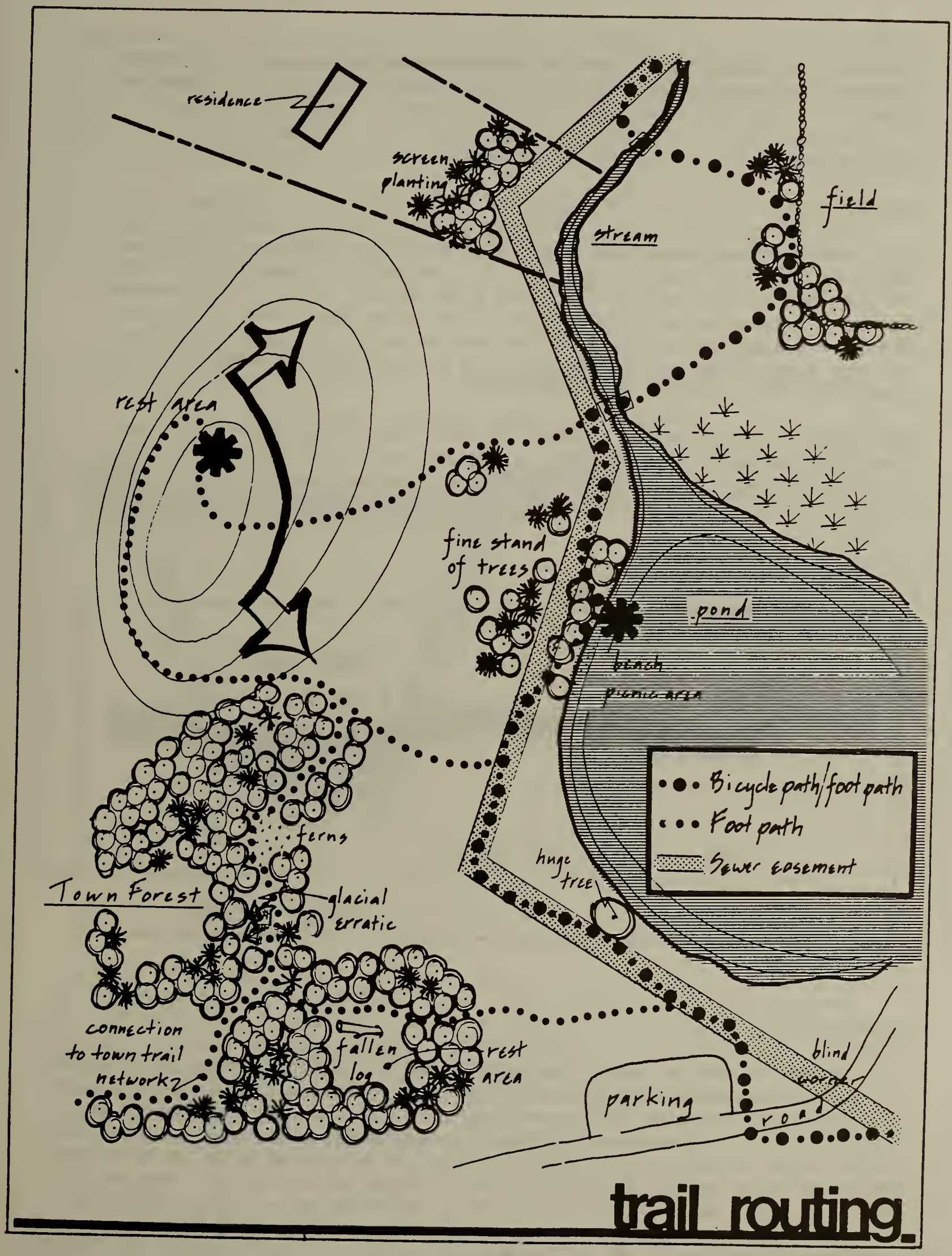
TO AVOID	TO TAKE ADVANTAGE OF
a wetland	a view
private residence near easement	publicly owned recreation land
dump	historic site
school	good stream crossing
poor road crossing	

The trail may leave the easement to wind round a hill or loop around a field. Like the interceptor and the trail easement, the bike trail and the footpath, if both are included, do not need to run together at all times. The pedestrian can manage more difficult terrain than can the bicyclist, trail design can be responsive to this greater freedom of movement. Any portions of the trail outside of the easement would generally not be eligible for any of the 201 "site restoration" funding.

Layout

Since an interceptor line is usually laid to take advantage of gravity flow and the least cost routing, its path is likely to be a series of long linear sections with the least possible number of change of direction points. This maybe less desirable aesthetically than it is economically. Careful attention to the routing of the recreational path within the easement is therefore essential. The typical easement will range between ten and sixty feet wide. Although the narrower widths present less scope for moderating the linear severity of the easement, an imaginative designer will enjoy the challenging problem. Determining an interesting route is particularly important for footpaths. The walker's slower pace allows him or her to enjoy detail that the cyclist misses.

Trails are more than opportunities for recreation and exercise---they bring the visitor to a special and intimate relationship with the terrain and the plants and wildlife that it supports. The trail route, even if channeled within the easement, can be chosen to reveal the nature of the landforms or the variety of plant life. The trail can curve to the water's edge and away, can move close to an old stone wall or fine tree, can bend to avoid a particular fine stand of ferns.



trail routing

People find trails that curve and bend--revealing, concealing, alternating vista with confinement--to be the most interesting to walk or bike.

Construction

Unpaved Trails

The simplest type of multiple use facility is the hiking right of way over the restored easement surface. No footpath is constructed, the route is just marked with signs indicating that the way is rough and natural. For more intensive use, materials such as stone dust, wood chips, bark mulch or crushed stone could be laid on the path to prevent erosion. In some cases these may be alternatives to the loam and seeding or other planting used in normal site restoration.

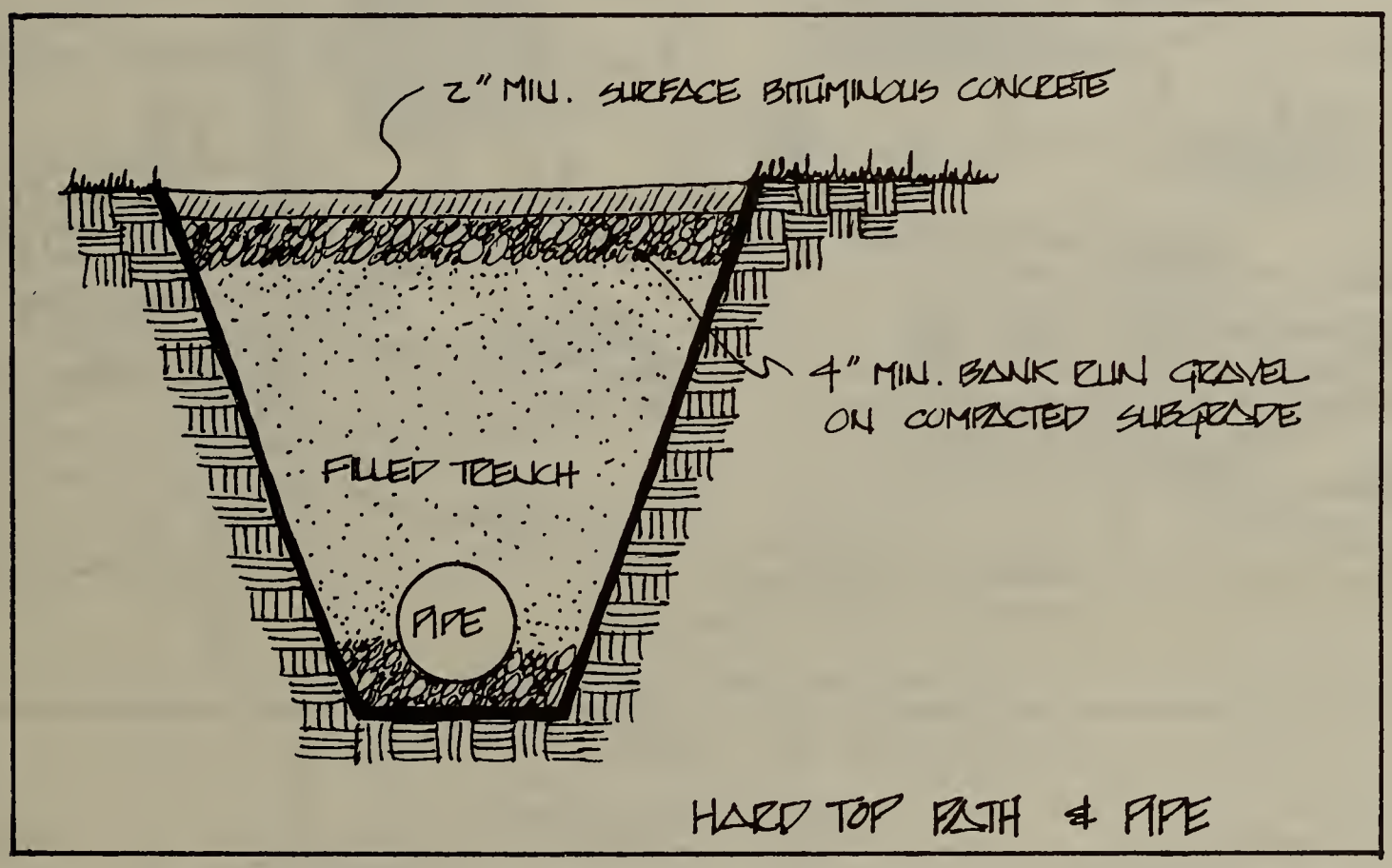
The suggested minimum for a public hiking trail is three to four feet, the width necessary for a human to traverse uninhibitedly. For comfort, it is recommended that the corridor be six to ten feet wide and should include a five foot prepared path.

Paved Trails

The sidewalk used for bicycling as well as for walking, known as a bi-walk, is a familiar compromise in the Northeast. Lincoln and Wayland have built a connecting system of these combination facilities; one runs along the Charles River in Boston and Cambridge. Inevitable conflict between different types of users may produce accidents if the bi-walk is heavily used. These separate walking and biking trails would be preferred. However, in areas of light use, or where one type of use-walking or biking-dominates, the bi-walk is an effective solution. While six to eight feet is the usual standard, a bike path can be narrowed to a three foot minimum on the ground with four feet of clearance at handlebar height.

Because the pipe will be laid in a trench of varying depth, it is essential that the fill be adequately compacted in order to place a hard top path over the trench. Poor composition will result in additional settling and cause the paving to crack. A hardtop path may be laid directly over the pipe line since excavation for servicing is infrequent. Intervals between servicing generally exceed the lifetime of the paved surface.

Bike paths should be hard top. Both the Town of Lincoln, Mass. and the Washington Suburban Sanitary Commission report that stone dust bicycle paths rutted and puddled. Both have switched to bituminous concrete.



HARD TOP PATH & PIPE

If, for some reason, the bike or foot path cannot be built at the same time as the pipe is laid, the surface of the trench should be rough graded six inched below the final grade and should be given a temporary surface. If the permanent restoration planting is also to be carried out later, the sewer contractor should plant temporary cover on the shoulders for erosion control. Even without a delay, the contract may require a time period for additional settling before placing the hardtop.

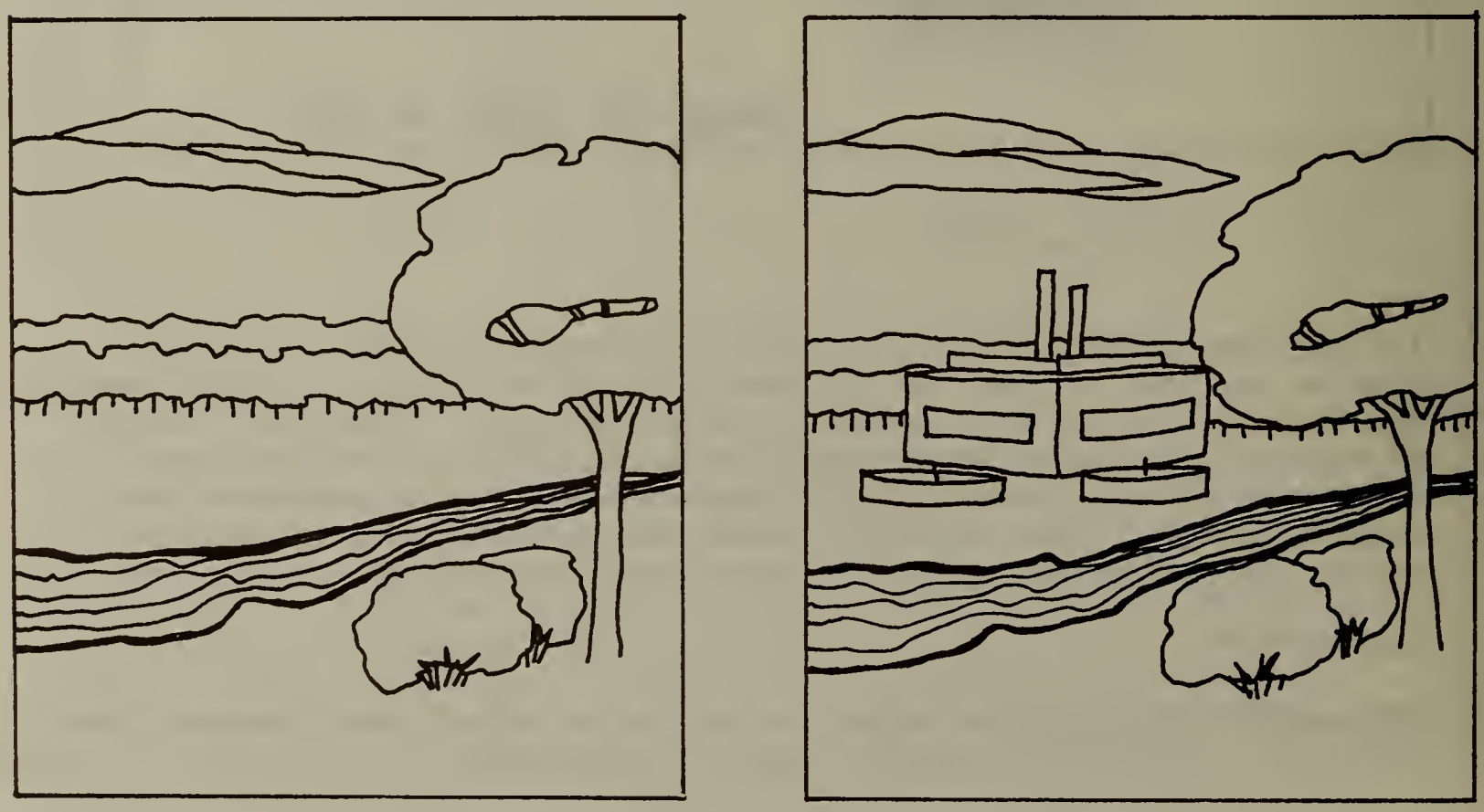
LANDSCAPING

If possible existing site vegetation should be undisturbed throughout construction. Protection measures should be undertaken to prevent the destruction

of mature trees and excessive erosion. Its destruction will require later planting to return the area to an acceptable condition.

The site designer and architect should consider the visual impact of the facilities on the general landscape (see below). Some facilities can be placed underground, others fit into the topography.

Low Visual Absorption



High Visual Absorption

Examples of Treatment Works and Recreation Components

(a more elaborate case)

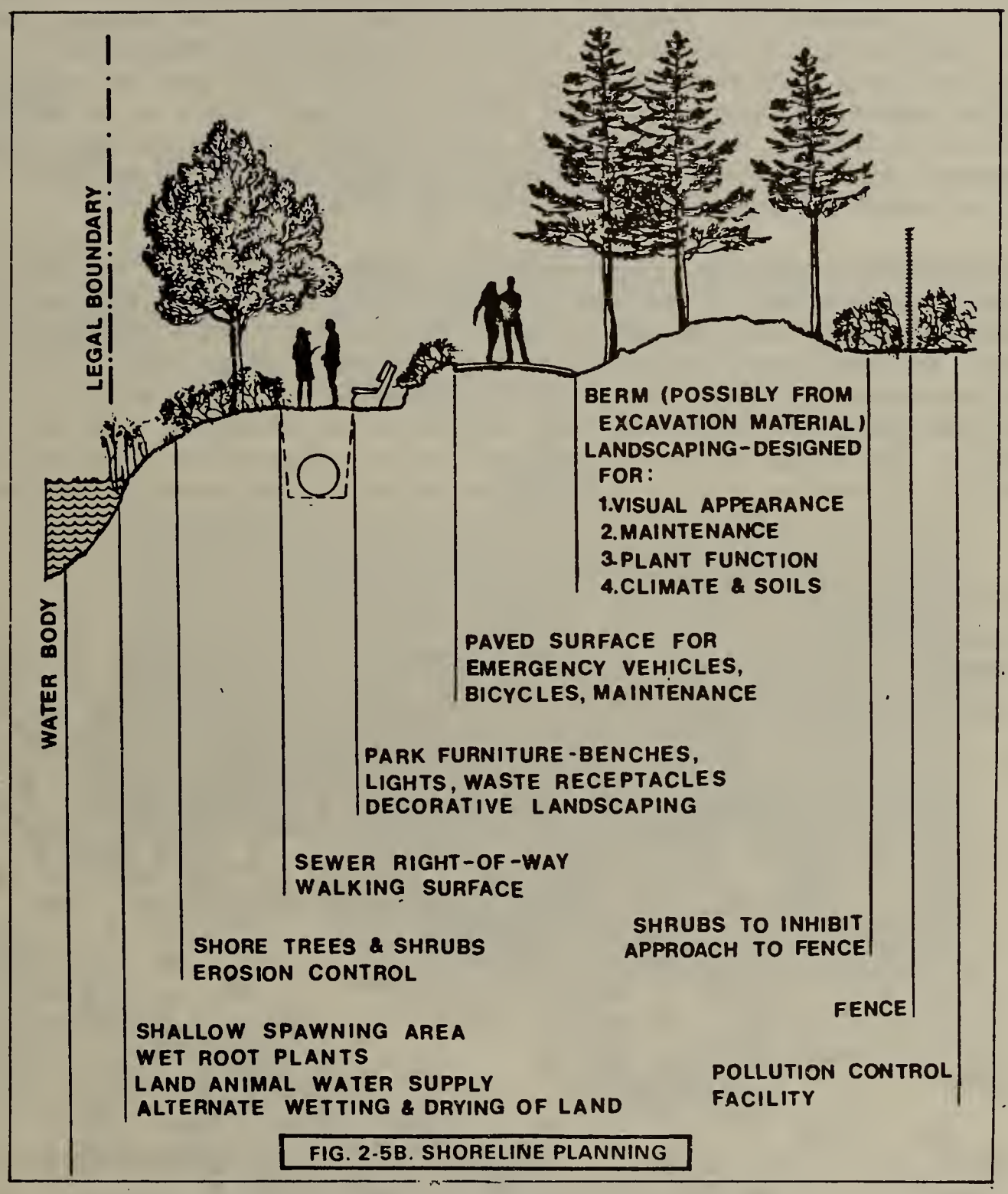
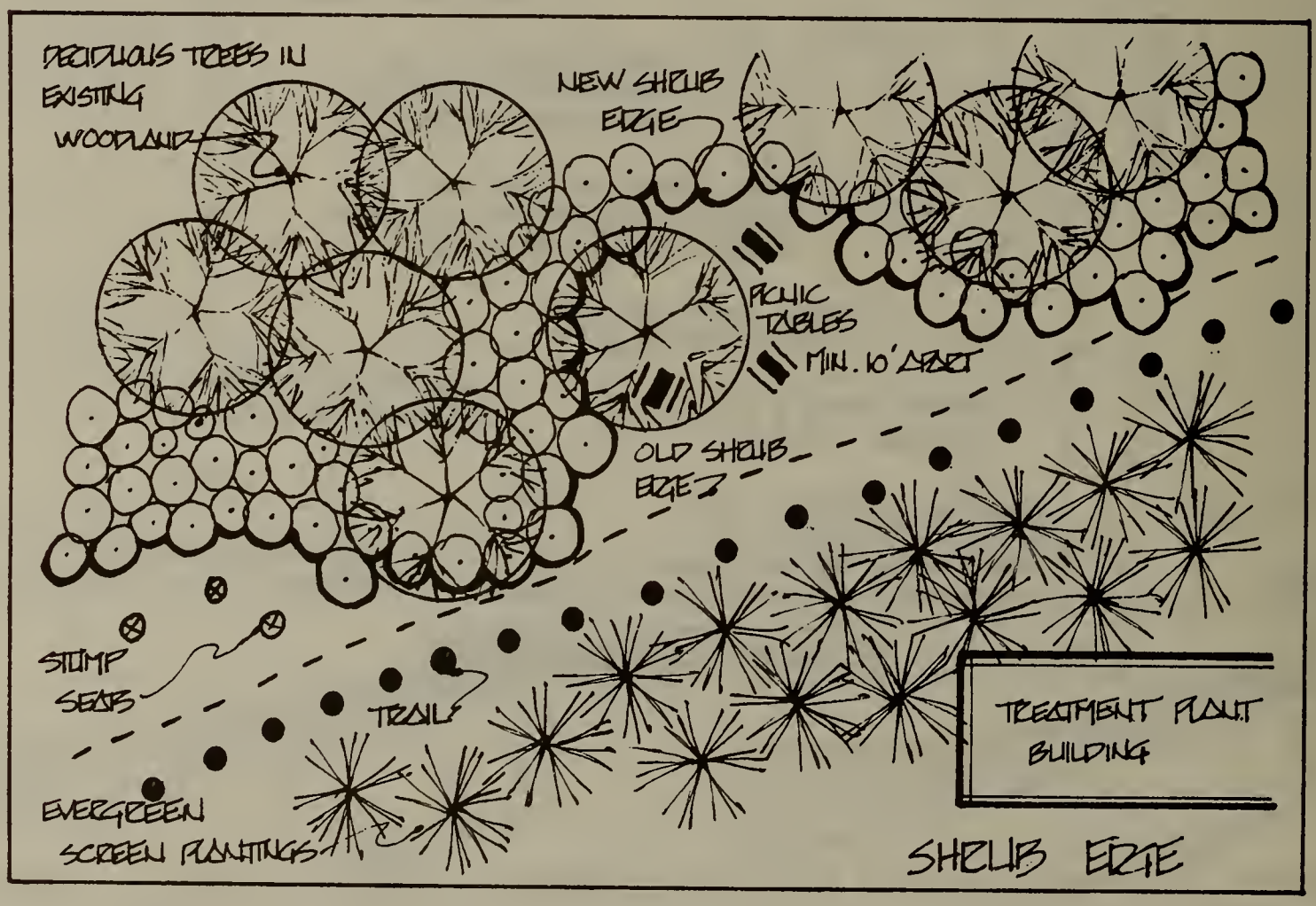


FIG. 2-5B. SHORELINE PLANNING

Source: R. Ernest Leffel's Direct Environmental Factors at Municipal Wastewater Treatment Works.

Existing or newly planted vegetation can be used as a visual screen for process elements and buildings. Of course, the value of the screen must be assessed for all seasons and throughout the natural history of planting. Planting should be considered for control of slope erosion and water erosion and water runoff, and to emphasize architectural or site forms, so that it can frame attractive objects as well as hide unattractive ones. In considering major planting for any purpose, views to, from, and on the site must be carefully studied. Planting can be designed to shade processes, buildings, paths, and truck yards in summer and still allow effective use of winter light. If landscaping elements are to be used, the local soil, climatological, and biological conditions should be carefully investigated by a competent landscape architect or nurseryman, before investment is made in fragile vegetative materials. Materials requiring little or no maintenance are to be preferred over those requiring a higher degree of care. Planting near open basins should be designed so that leaves and needles do not fall or cannot be easily blown by the wind into process waters.[1]

A planted screen should be approximately twenty feet wide. It can be used to buffer a waste water or septage treatment facility or pump station from private houses or recreational areas. It can also form a protective wind break. In rural areas, planting will be informal using trees or shrubs that are compatible with the existing woodlands. A shrub edge in a rural area also provides additional food and cover for wildlife. In urban park areas, a more formal planning approach may be appropriate. For either case, a mix of vegetative species is more ecologically and visually desirable.



[1] Leffel, R. Ernest, Direct Environmental Factors at Municipal Waste Water Treatment Works, EPA, Washington, D.C., 1976. p.20.

REST AREAS

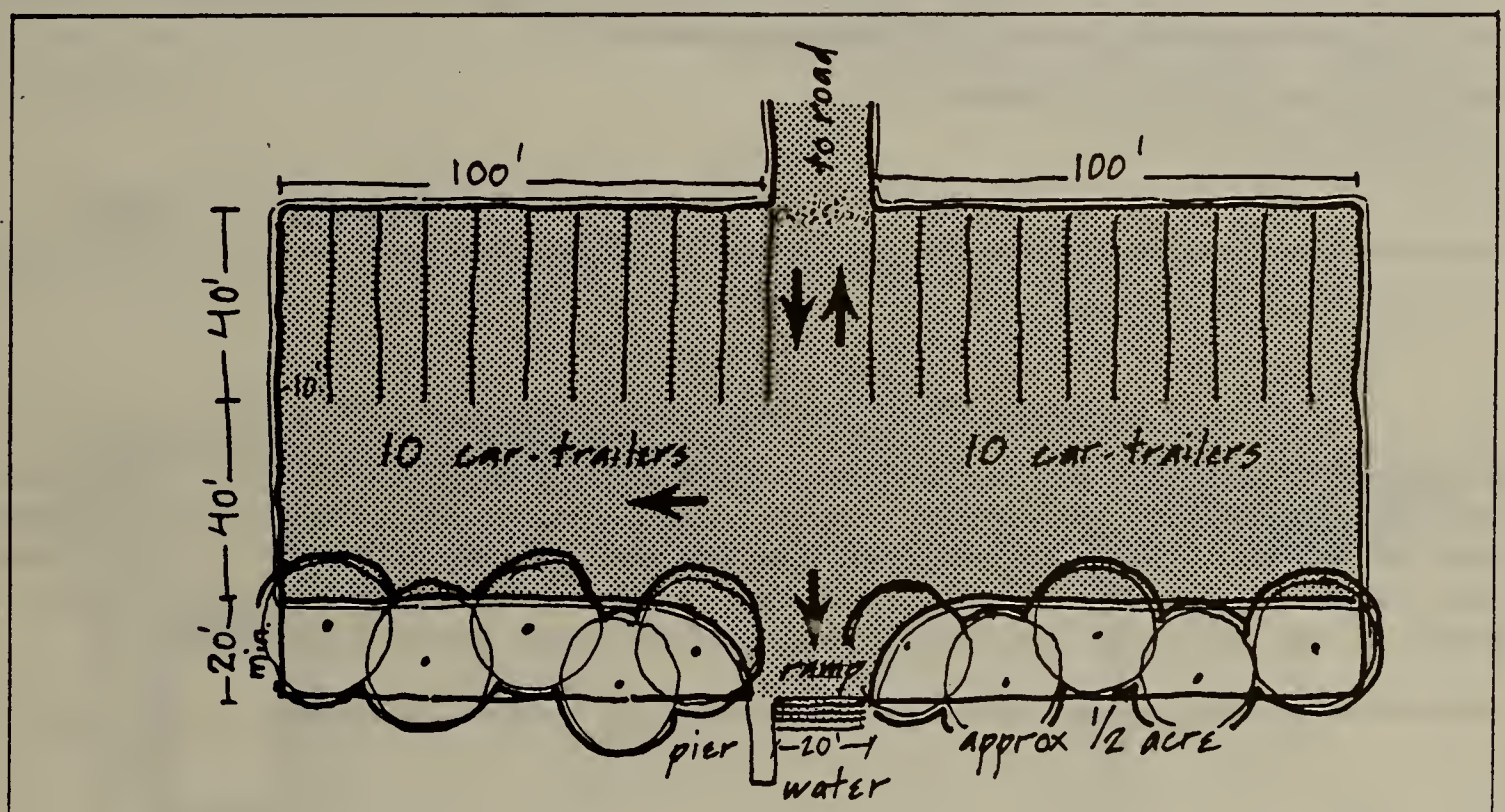
Rest areas should be provided. Spacing of the rest areas will depend on the intensity of use, however one every quarter mile is at general a wide-line. Where possible they should take advantage of vistas or unique landforms. In many cases benches do not need to be provided. Available stumps, logs or large rocks can be used for seating.

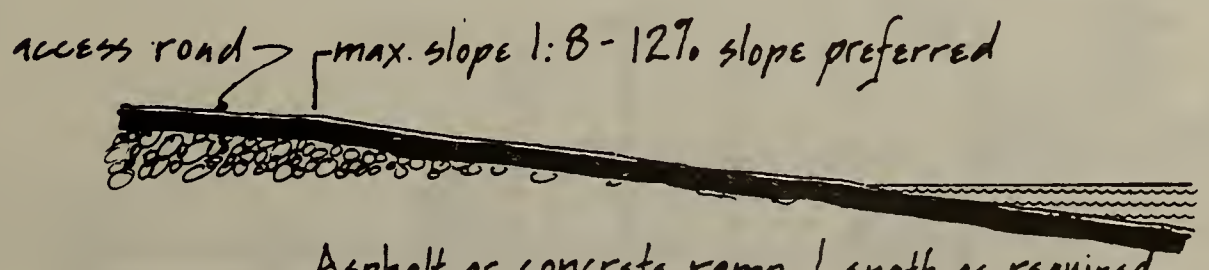
SHORELINE ACCESS

Boat Ramps

Boat ramps can range from a 5-10 foot wide layer of gravel for canoe launching to a much wider paved launching ramp.

If no parking lot is nearby, recreationists will leave their car wherever they can. It is best to include some parking area if a boat access or canoe launch is contemplated. A more elaborate launch ramp, suitable for larger boats appears below.

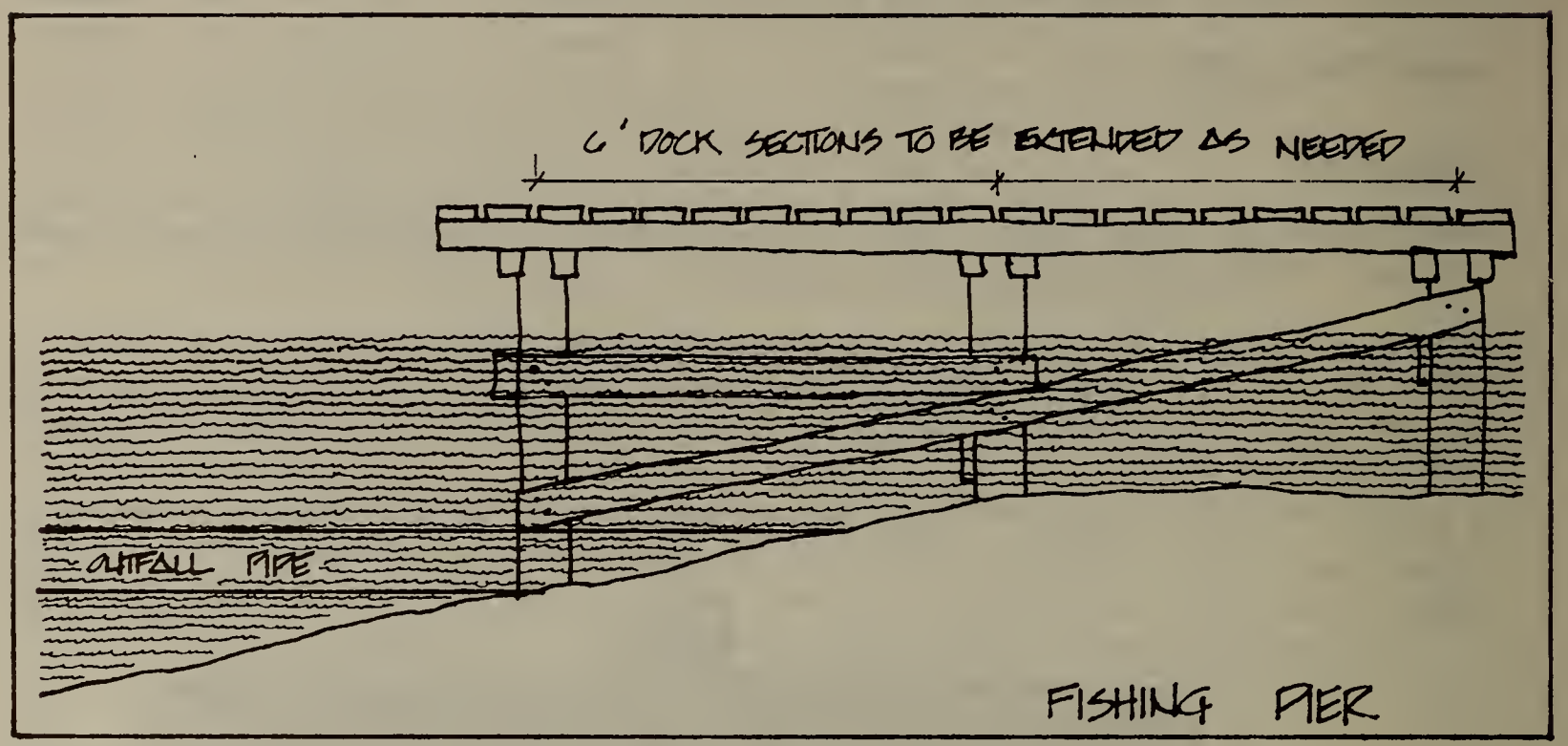




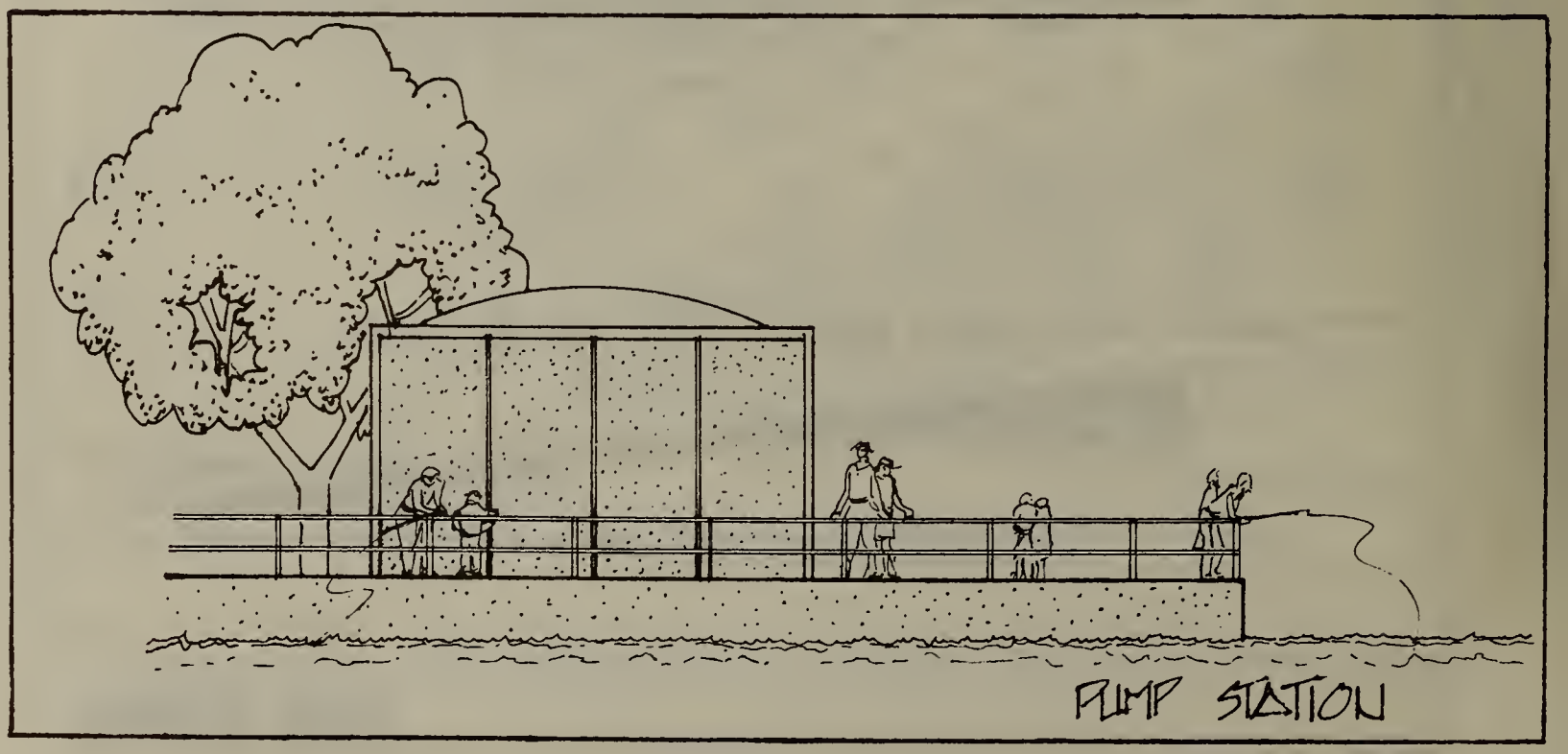
Asphalt or concrete ramp. Length as required.

boat access

As listed in Table 1 on existing multiple use projects, a fishing pier has been used as the support structure for an outfall pipe. This could be appropriate for both fresh and salt water outfalls (see below). The pipeline should extend beyond the end of the pier for health and safety reasons.



Wastewater treatment facilities are often near a river or stream. A fishing pier could also be included at a pump station or a treatment plant independent of the outfall. Although such piers may not be eligible for 201 funding, they would be a means of providing access to the water, one of the major goals of the multiple use provisions in the Clean Water Act.

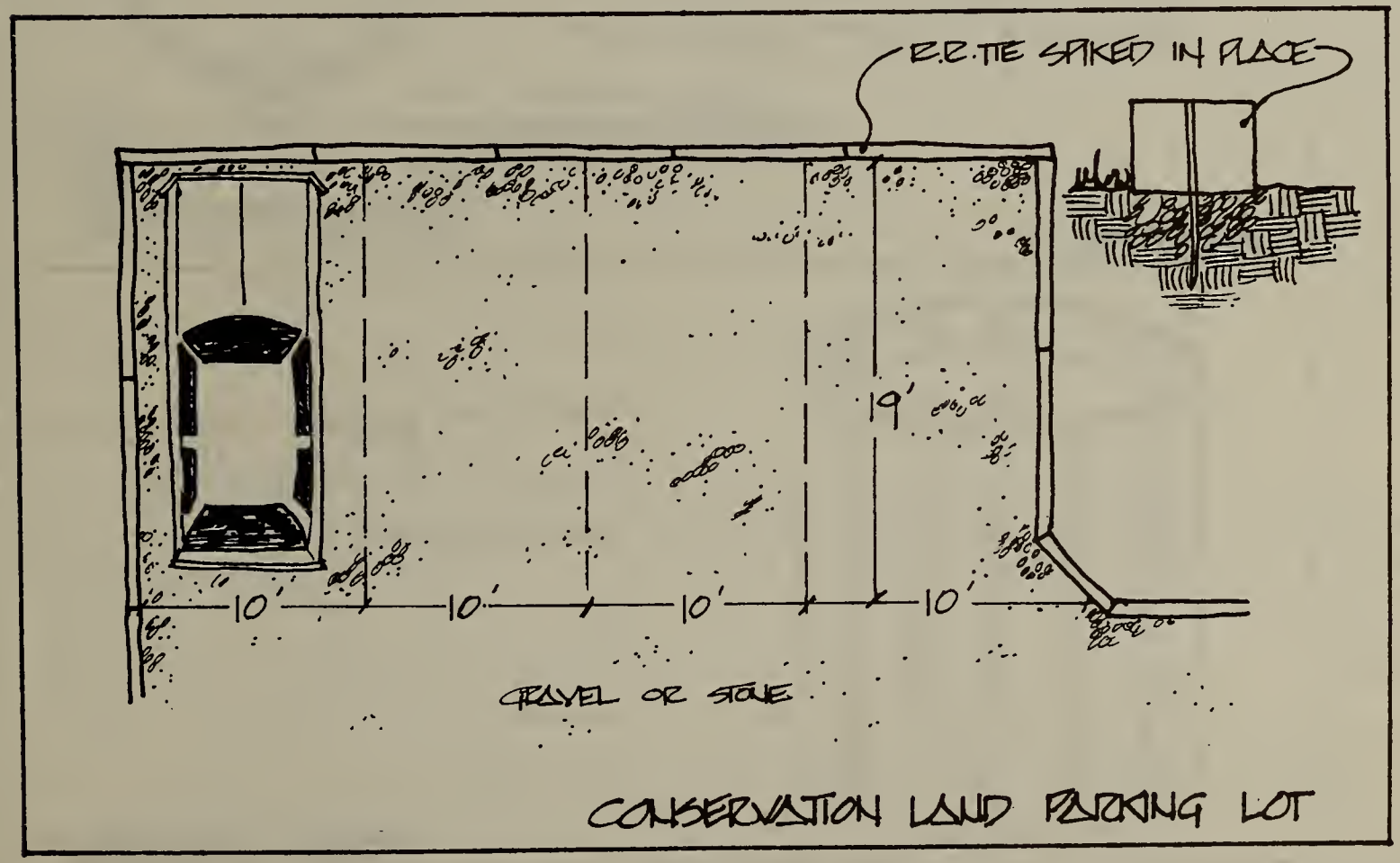


ACCESSORIES

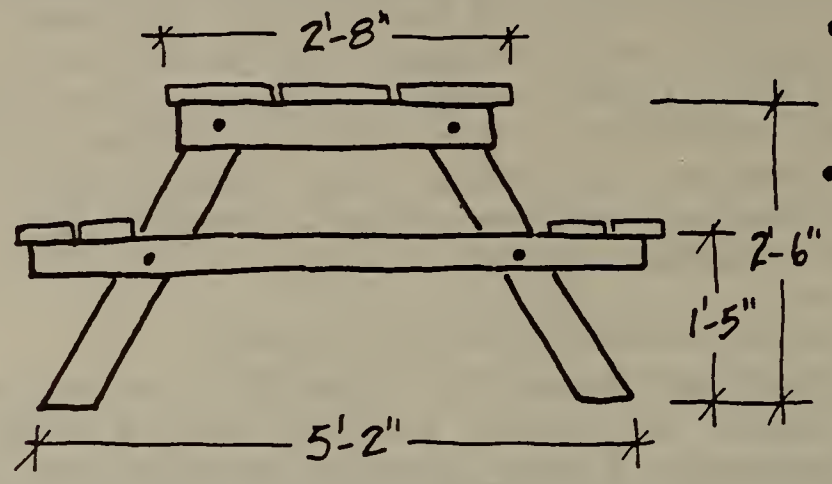
In order to reduce later maintenance costs, sturdy and well built accessories should be included in the project. Lighting may be necessary for nightime use, fencing is generally required for security purposes, with or without multiple use. Signs, trash containers and picnic areas will follow the style and policy of the park managers or Conservation Commission in the areas. Picnic tables can be very simple and can be built in local schools or by youth groups such as the Scouts. Logs from cleaned areas could be used for picnic tables, benches, marking trails in parking lots. Fireplaces may also be desired. Design examples of some of these items appear on the next page.

Parking may be extensive or minimal depending on level of use and community wishes. A simple dirt or gravel lot similar to those used in conservation areas may be entirely appropriate. A large asphalt lot with rest rooms, water and picnic areas may be built where the trail and another recreational area coincide.

Lots should be located to reduce visual impact, preferably in areas where they will be screened from view and canopy shading is available to reduce heat buildup.



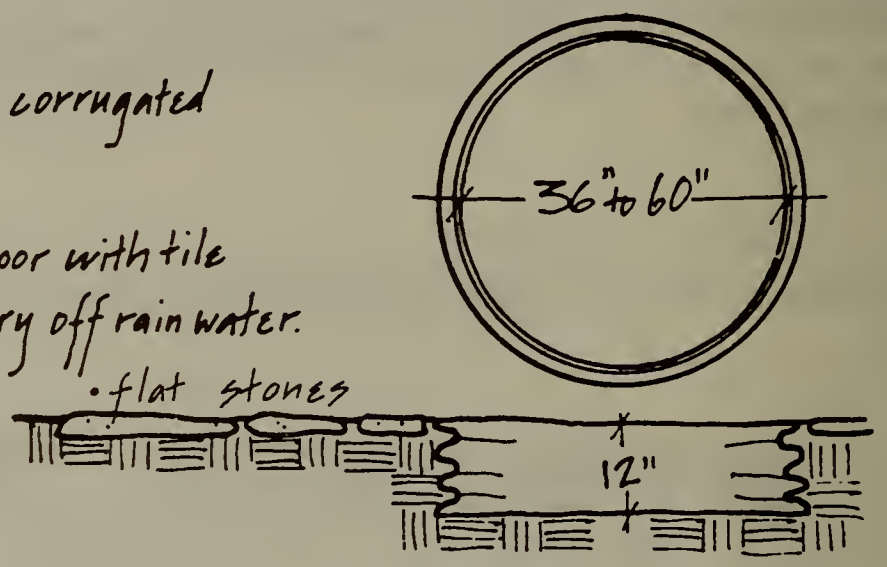
CONSERVATION LAND PARKING LOT



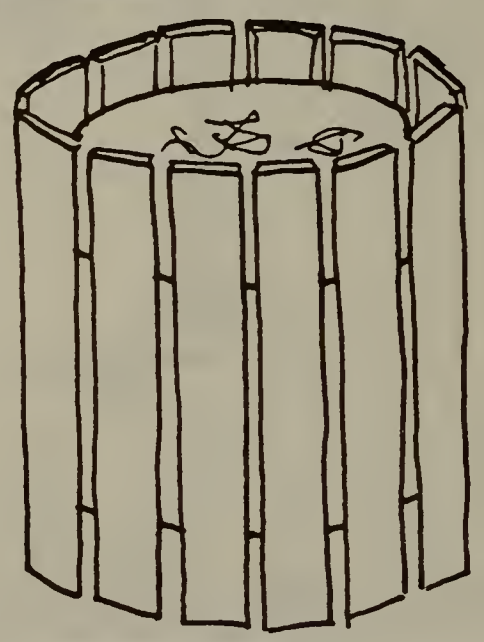
- table top can be any length. 6' is typical.
- tables should be set no closer than 10'.

picnic table

- fire hole made from corrugated metal culvert.
- hole has gravel floor with tile under-drain to carry off rain water.



fire hole



- SMALL SIZE garbage can in wood slat holder. Holder can be spiked to ground.

trash container

Three Case Studies

The brief case studies that follow offer a closer look at the realities of multiple use in three communities.

Northborough, Massachusetts

In 1976, the Town of Northborough, Massachusetts missed an opportunity for multiple use of the interceptor planned along the banks of the Assabet. Early in facility planning stages, Northborough citizens requested Camp, Dresser and McKee, consulting engineers for the project, to investigate the possibility of combining a public walkway with the interceptor. Conditions seemed favorable. However, normal EPA restoration procedures were not adequate even for the minimal surfacing and landscape requirements of a walkway and the project did not score high in the HCRS priority system. It proved impossible to secure other funding and the project dropped. Tracy and Simmons, who worked on the project, reflect as follows:

> Although each of the groups involved in the proposal-citizens, the Commonwealth of Massachusetts, EPA and the Bureau of Recreation - like the concept, no real authorization of funding has come forth...Northborough may have been the first community in Massachusetts to pursue this type of multi-use project. In a sense, we tested the waters and found the bureaucracy not ready for the issues involved. We are still hopeful that the conflicts can be resolved among the various agencies. The Town is currently looking into the feasibility of financing the project itself over several years - accomplishing the goals on a piece-meal basis. If the sewer easement can be restored to a condition permitting future modification, then a trail may still be a reality.[1]

To date, the project has not been carried out.

Lowell, Massachusetts

The issue of multiple use of publicly owned wastewater treatment facilities (POTWs) was first seriously raised in Lowell in late 1976 by the Northern Middlesex Area Commission. At this time the new EPA facilities plan had been presented; in fact, Phase I along the Merrimack River was under construction. At this same time an overall bike route plan had been drawn up by the City Division of Planning and Development for implementation in stages. A route along the Merrimack was unanimously chosen by citizens, planning, and cycling groups as the backbone of the system because of its scenic beauty, its strategic location with respect to city-wide transportation, and the presence of publicly held land along its path.

Many people felt that although Phase I was nearing completion - its twenty foot flat shelf along the river was clearly visible - that taking action

[1]Jack Tracy and Cary Simmons, "Can This Sewer Project Have Recreational Benefits?", Public Works, October, 1977. Reprint.

to attempt, belatedly, to include a bikeway would be a worthwhile step. The project had exceptional recreation value and would have been a first rate example of the multiple use concept even then being encouraged by EPA and the U.S. Department of the Interior. In fact, a conference jointly sponsored by the two agencies a year earlier (November 1975), "Water Clean-Up and the Land" had explored ways to "synchronize outdoor recreation and open space programs with the clean-up of the nation's rivers and lakes" and had offered an illustrative field trip to the Lowell Cultural Park as an outstanding example of multiple use potential.

The necessary change order would have substituted bituminous concrete for ten foot strip of rip-rap and a fence on the water side of the construction. Although planning agencies, elected officials, city departments, and individual citizens supported the multiple use effort, it was unsuccessful for several reasons.

A change order apparently could have been executed if funding for the bikeway could have been resolved. EPA will pay for multiple use as long as the combined cost is no greater than the cost for an equivalent single purpose facility. In Lowell's case, the fence proved controversial. As a necessary part of the recreational component, the fence could not be paid for by EPA. The agency, however, can fund items necessary to general safety. If sewer construction results in an 'attractive nuisance' where there was none before, EPA will bear the burden of citizen protection. The Lowell sewer seemed to fit this category. Unfortunately, documentation was not produced in time. Other funding sources were sought but did not materialize. Heritage Conservation and Recreation Service (then BOR) funds could not be used because the land under the bikeway was not to be purchased.

Lowell - Phase I Interceptor

1 Interceptor without bikeway under construction.

2 Interceptor with planned bikeway under construction.

3 Interceptor with planned bikeway in planning stages.

Source: City of Lowell Bikeway System Map
Division of Planning and Development

river interceptors

In addition to lack of advance planning and funding difficulties, there was neighborhood opposition to the project. The Sisters of Mercy at the nearby St. John's Hospital feared noise and an increase in vandalism; these fears were shared by those in housing for the elderly located on the pipe route. Individual landowners along the route were also unconvinced. The City was concerned about liability in case of accident.

Phase I is not complete (see above). There is no bikeway on it, nor is one planned. The efforts that went into developing it were not in vain, however. Bikeways are designed into the northeast bank interceptor and are planned to be designed into the south bank and northwest bank in those sections that directly abut the river.

The Phase II bikepath is now under construction. Learning from the previous experience, the Town requested two prices for the construction bids: one with regular pavement and one with pavement suitable for a bikepath. The prices came out the same. EPA was convinced that a fence was essential for public safety with or without the bikepath and so was included as an eligible cost. The landowners, primarily the state and the locks and canals property, were very cooperative. The project is scheduled for completion in 1980 and the Town intends to continue the bikepath along Phase III.

It should be noted that sewers are planned and implemented by agencies whose primary concern is not recreation. In order to assure that these bike paths are in fact constructed, coordination with recreation agencies is essential. However, developing multiple use facilities requires more than existing funding, more than memos of understanding between agencies and mobilization of forces in advance. While these are necessary, a vocal and organized citizenry insisting on completion of the project with its recreational component as planned is a key ingredient in project implementation.

Naperville, Illinois

Has multiple use succeeded anywhere? Indeed it has. In Naperville, Illinois, the Springbrook Regional Water Reclamation Center was dedicated in 1977. The plant can handle an average flow of 10.0 million gallons per day or a population of 75,000, including industry. It replaces six smaller plants.

The 125 acre site was planned from the outset as a multi-use public service/education area. Plant buildings were deliberately designed to be visible and attractive. Fifteen and one half acres are leased to the Naperville Park District for community gardening; twenty-eight acres are leased to the Community School District #203 for a student farming program using digested sludges for fertilization. An Eagle Scout is constructing a canoe launch/fishing area and parking near the outfall on the DuPage River.

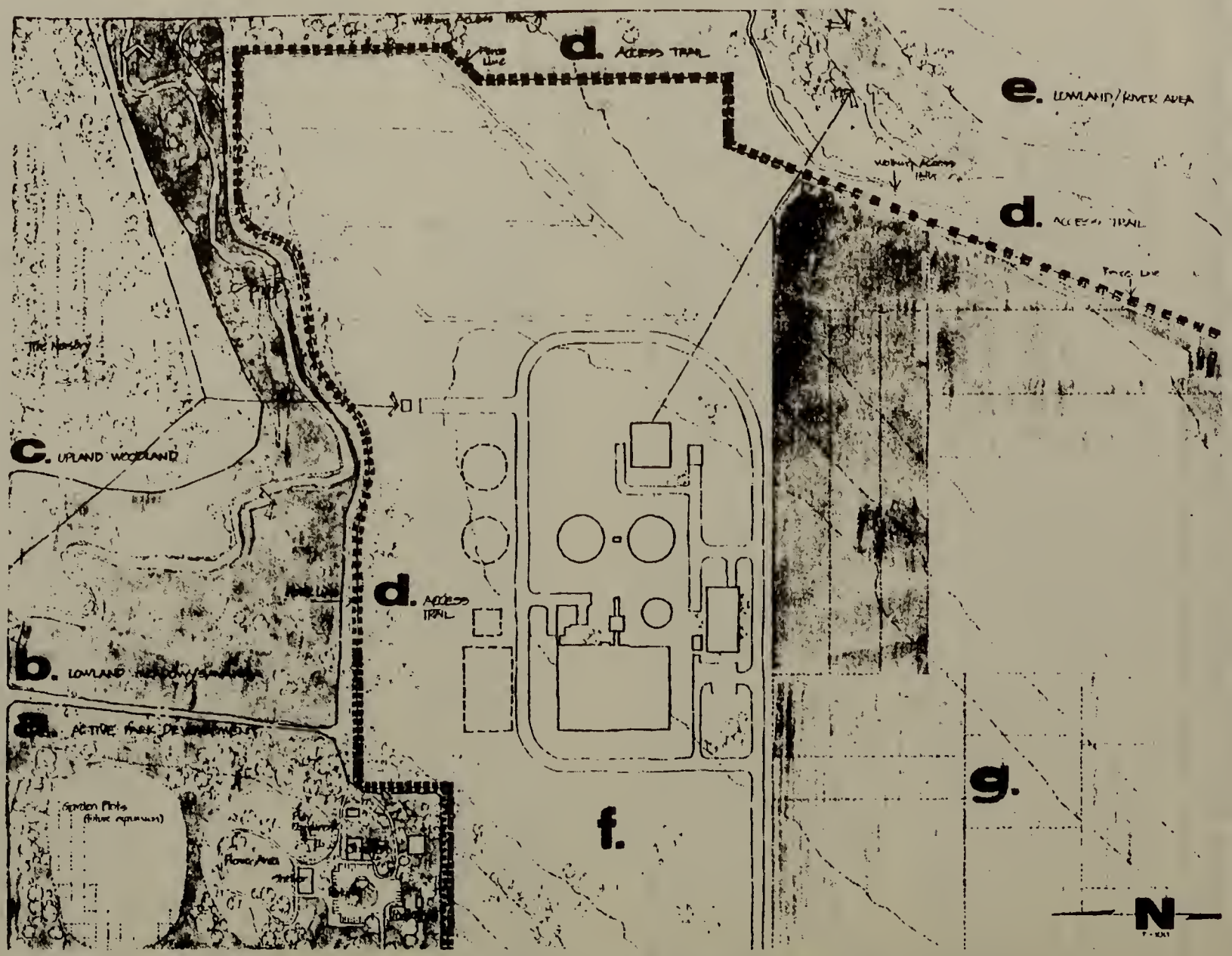
The Naperville High School Astronomy Club has installed an observatory. A weather station serves the Naperville Sun Newspaper and the Department of Water and Wastewater Utilities. A visitor observation deck permitting safe viewing of nearly the entire treatment process was developed with school children particularly in mind; the parking lot includes space for a standard school bus.

A brochure describing the treatment process keyed to an aerial photograph is

given to each visitor. A conference room with audio-visual equipment, treatment units and instrument control systems display panels are other technical and educational facilities offered by the complex. A neighboring town uses the site as a polling place.

Future plans include a tree nursery and horticultural area, pistol shooting range, play equipment and landscaping, hiking trail system and wooden foot bridge, a water supply well and storage tank facilities, and a solar energy demonstration.

The total combined project cost was ten and one half million dollars. Funding was 55 percent EPA, 25 percent Illinois Environmental Protection Agency, and 20 percent local sewer revenue bond issue.



Proposed Land Uses:

a. **Active Park Development:**
- restore existing farm structures
- develop picnic shelter with play equipment area
- plant trees & grass maintain open areas
- develop garden plots for city residents or school children to grow gardens
- garden plots for future playfields

b. **Lowland Meadow - Savanna:**
- preserve existing trees & native plantings
- mow open grass areas once per year to obtain meadow field openings

c. **Upland Woodland:**
- allow field to regenerate by itself no mowing or planting
- future woodland park area with bridge access across stream

d. **Access Trail:**
- preserve and maintain existing access road as a trail walking path to connect river area with other areas

e. **Lowland River Area:**
- leave in its existing natural state
- fishing, waterside access

f. **Plant Facilities & Grounds:**
- advanced processing units
- administration building
- visitor's area for educational programs

g. **Crop Management Area:**
- vocatroal high school student farming
- on site sludge fertilization

SPRINGBROOK REGIONAL WATER RECLAMATION CENTER
naperville - plainfield road naperville, illinois

References

Environmental Protection Agency
"The Clean Water Effort Can Also Meet Public Recreation Needs", article from the Environmental Protection Agency Journal, June 1979.

Environmental Protection Agency
"The Public Benefits of Cleaned Water: Emerging Greenway Opportunities, 1977.

Environmental Protection Agency and Department of the Interior, Heritage Conservation and Recreation Service
"Water Cleanup Recreation and the Land," 1979.

Environmental Protection Agency
"Water Cleanup and Recreation--Making It Work For People (A Report on the Joint Environmental Protection Agency/Heritage Conservation and Recreation Service Workshop, Chicago, Illinois November 14-15, 1978)".

Heritage Conservation and Recreation Service
"What about Clean Water Recreation? No. 1, Fulfilling Recreation and Open Space Requirements in Water Quality Management Planning", 1979.

Heritage Conservation and Recreation Service
"What About Clean Water Recreation? No. 2, Fulfilling 201 Program Recreation and Open Space Requirements" 1979.

Letter from Richard P. Kotelly, Deputy Director
Water Programs Division, Environmental Protection Agency to Reginald A. LaRosa, Agency of Environmental Concern, Vermont, on November 27, 1978.

Merrimack Valley Planning Council
"Task III: Legal, Institutional and Financial Issues," October 1979.

National Recreation and Park Association
"The Big Cleanup" in Parks and Recreation, February 1977.

Northern Middlesex Area Planning Commission
"(Draft) Design Criteria for Multiple Use Planning Project," March 1980.

Memorandum from John T. Rhett, Deputy Assistant Administrator for Water Program Operations Environmental Protection Agency to Environmental Protection Agency Water Division Directors, June 20, 1979 enclosing draft guidelines for the recreation use analysis portion of the facilities plan.

Design Guideline References

The following manuals or standards will be helpful both to the professional designer and to citizen groups that may be considering multiple use. Those marked with a star are stimulating reading as well as factually useful.

GENERAL

Callender, John M., ed. Time Saver Standards, New York: McGraw-Hill Book Company, 1966.

Ramsey, C. G. & Sleeper, M.R. Architectural Graphic Standards, 6th ed. New York: Wiley, 1970.

SITE PLANNING

*Lynch, Kevin. Site Planning, 2nd ed. Cambridge, Mass.: Harvard University Press, 1961.

*Rutledge, Albert J. ASLA. Anatomy of a Park. New York: McGraw-Hill Book Co., 1971.

WALKING TRAILS

*Ashbaugh, Byron L. and Kordish, Raymond J. Trail Planning and Layout. New York: National Audubon Society, 1965.

*Proudman, Robert D. AMC Guide to Trail Building and Maintenance. Appalachian Mountain Club, 1977.

BICYCLE PATHS

*Balshone, Bruce L., Deering, Paul L. and McCarl, Brian D. Bicycle Transit. Its Planning and Design. New York: Praeger Publishers, 1975.

Bikeway Planning Criteria and Guidelines. Institute of Transportation and Traffic Engineering. Los Angeles, Calif. 1972. Available from Office of Research, HRS-41, Federal Highway Administration, Washington D. C. 20590. Free.

DESIGN DETAILS, STREET FURNITURE

Robinette, Gary O. ed. Landscape Architectural Site Construction Details. Environmental Design Press, 1976.

*Walker, Theodore P. Site Design and Construction Detailing. D.C. Heath Co., 1976.

United States Department of the Interior, National Park Service. National Conference and the American Institute of Park Executives. The Park Practice Program.

SANITARY PLANNING

*Tabos, Richard D., Shapiro, Michael H. and Rogers, Peter P. Land Use and the Pipe. Lexington, Mass.: D.C. Heath & Co., 1976.

APPENDIX A

Information Sources for Recreation/Open Space Inventory

1. Present and 20-year projected land uses (Source: land use maps from 208 Plans and Water Quality Management Reports)

2. Publicly owned or protected lands, including
   a. publicly owned, e.g. federal, state, county, town (Source: land use maps from 208 plans and Regional Planning Agencies)
   b. semi-publicly owned, e.g. Trustee's of Reservations, Mass. Audubon, land trusts (Source: Visits to their Central Offices)
   c. restrictions/easements, e.g. wetland restriction, scenic river restrictions, senic easements (Source: DEM wetlands restriction-Sheldon Shapiro-and Scenic River-Katherine Preston Programs)
   d. protective zoning (any open space, watershed conservation district, floodplain, wetland, etc., zoning (Source: see above)
   e. existing agricultural lands and where mapped, prime agricultural lands (Source: SCS prime agricultural land maps and aerial photos, SCS Office, Amherst; Susan Redlich DFA for agricultural restrictions)
   f. places on the National Register of Historic Places and Archaeological Sites (Source: Mass. SCORP and Mass. Historical Society)

3. Existing water-based recreation facilities, including
   a. boat ramps, marinas, access sites (Sources: Public Access Board, DEM Scenic River Inventory, CZM for costal areas)
   b. swimming beaches or holes (Source: DEM Office of Planning Debbie LeBlanc)
   c. fishing trails, stocking areas (Source: Division of Fisheries and Wildlife publication)
   d. hunting preserves, shooting ranges (Source: Div. of Fish & Wildlife, Chet McCord)
   e. shoreline trails (Sources: DEM Scenic River Inventory Katherine Preston and Trails Inventory Dave Fischer)
   f. wildlife preserves (Sources: Div. Fish & Game map, (d) above)
   g. other shoreline facilities e.g. camping sites, picnic areas, etc. (Sources: Div. Forests & Parks publication, DEM Scenic River Inventory, SCORP Inventory)

4. Critical areas proposed for and/or needing protection
   a. state scenic rivers (Source: DEM, Katherine Preston)
   b. Mass. heritage program (Source: DEM, Martha Fischer)
   c. state trail system (Source: DEM, Dave Fischer)
   d. urban heritage parks (Source: DEM, Phil McClellan)
   e. areas of critical environmental concern (Source: CZM)
   f. unique scenic, historic or ecological sites (Source: local knowledge)

g. wetlands proposed for state restriction (Source: DEM, Sheldon Shapiro)
h. federal and state acquisition sites, e.g. Parks, Forests, wildlife management areas (Source: SCORP)
i. Town Open Space and Recreation Plans (Source: Conservation Services, Joel Lerner)
j. greenway plans (Source: Watershed Associations)

5. Access from transportation facilities (Source: map of roads, any public transit available - RPA transit plans, SCORP access study)

Appendix B

RIGHT OF WAY AGREEMENT

THIS AGREEMENT made the day of Nineteen Hundred and Seventy Eight

BETWEEN

AND

NEW JERSEY CONSERVATION FOUNDATION, a non-profit organization and a New Jersy Corporation incorporated under and pursuant to Title 15 N.J.S., having its office at 300 Mendham Road, Morristown, New Jersey, hereinafter designated as the Party of the Second Part;

NOW, THEREFORE, for and in consideration of the sum of One Dollar ($1.00) to it and hand well and truly paid by the said Party of the Second Part, at or before the sealing and delivery of these presents, the receipt whereof is hereby acknowledge, and the said Party of the First Part being therewith fully satisfied, contented and paid, the Party of the First Part does hereby grant, bargain and sell to the Party of the Second Part, its successors and assigns, a non exclusive right of way and easement for it, its successors and assigns, to pass and re-pass freely on foot or with animals or non-motorized bicycle, in common with the Party of the First Part herein, its successors and assigns, over and across a right of way along the former Morris Canal and Towpath, as is more particularly described on Schedule A hereto annexed. Motorized vehicles shall be permitted on the land covered by this easement only for emergency, service and security purposes.

TOGETHER WITH the right of the Party of the Second Part to improve the right of way by landscaping, planting and other such considerations and to improve the property for limited recreational purposes of trails and foot-paths. This right of way and easement is intended for the purpose of extending the rights of way for paths and trails of the Party of the Second Part along the Morris Canal and Towpath aforesaid over and across lands of the Party of the First Part, and it is understood and agreed that it is appurtenant thereto.

The Party of the Second Part recognizes the present use and occupation of the premises which are the subject of this easement by the Party of the First Part and agrees that there shall be no obligation or undertaking by the Party of the First Part, its successors and assigns, to construct, repair, maintain, improve or provide protection for, said right of way for the use and benefit of the Party of the Second Part hereto, or its successors or assigns. It is

further understood and agreed that the premises are the subject of a prior Easement Agreement between the Party of the First Part and the Rockaway Valley Regional Sewerage Authority as and for the operation and maintenance of an Interceptor Sewer and the parties hereto understand and agree that this Easement Agreement shall not supercede the provisions of the prior Easement Agreement between the Party of the First Part and the Rockaway Valley Regional Sewer Authority.

The Party of the First Part understands that the right and easement herein granted to the Party of the Second Part is intended for the activities common to greenbelt open spaces, outdoor education and recreational purposes. Expressly subject, however, to the reservations aforesaid, the Party of the First Part covenants and agrees not to erect any structure or buildings on the right of way without the prior consent or approval of the Party of the Second Part, its successors or assigns.

The Party of the Second Part may at any time transfer and assign the easement and interest created hereby to the New Jersey Natural Lands Trust created by Public Law 1968, chapter 425, or to any trust or other entity hereafter created by the legislature of the State of New Jersey for substantially similar purposes. If at any time this Party shall cease to function as a non-profit corporation with one of its primary purposes being the preservation of natural resources and open space (other than as the result of a merger into or consolidation with any other non-profit corporation with similar purposes), or shall be liquidated or dissolved, the easement and interest granted hereby shall thereupon be transferred and assigned to the Party of the Second Part to (a) another corporation selected by the Party which is exempt from Federal income taxation and is authorized to hold such an easement and interest in and with respect to property located within the State of New Jersey or (b) if no such corporation is then in existence then to said New Jersey Natural Lands Trust if then existing or to any other public body in New Jersey which is empowered to hold such an easement and interest.

IN WITNESS WHEREOF, the Party of the First Part has caused these presents to be signed by its proper corporate officers and caused its proper corporate seal to be hereto affixed, the day and year first above written.

By _____
President

ATTEST:

_____
Secretary

SCHEDULE A

Insert here a legal description of the lands subject to the Rockaway Valley Regional Sewerage Authority Easement Agreement.

Source: Patricia Tice, The Pathfinder: A Handbook For Citizens Planning for Multiple-Use of Federally Funded Clean Water Projects. Association of New Jersey Environmental Commissions (Draft) Environmental Protection Agency.

APPENDIX C

Funding

If an applicant is considering a multiple purpose project then funding would probably be obtained from more than one source. Funds are available from water pollution control and recreation/open space agencies. Substantial savings can be made in terms of time and cost through the combined design and construction of the multiple purpose project.

Procedural requirements of individual funding sources will have to be anticipated in order to coordinate fund availability. State and federal agencies administering these funds are attempting to establish institutional procedures to facilitate projects involving multiple purposes. Local agencies or groups are vital in this process in order to provide the inertia necessary to implement the successful integration of multiple purposes.

Table 3 lists the requirements of different funding sources and situations where they may be applicable. A description of each source is also included on subsequent pages.

1. Environmental Protection Agency

The Environmental Protection Agency (EPA) is the Nation's leading water pollution control agency and has primary responsibility for administering the Federal Water Pollution Control Act Amendments of 1972. Section 201 and 208 address multiple use projects.

Section 201 of the Act authorizes the EPA to provide federal funds to local governments to cover 75% of the costs for planning, designing, and constructing publicly-owned treatment facilities. These funds are disbursed through the Massachusetts Division of Water Pollution Control which, additionally, funds 15% of eligible costs to further assist the communities. Since September 30, 1978, federal regulations require that multiple use opportunities be addressed as a part of facilities planning. Funds for design and construction of the secondary use are in general ineligible for 201 funding.

During fiscal years 1979 and 1980, EPA funded DEQE's 208 water quality staff to perform a statewide assessment of recreation and open space opportunities associated with water clean-up. The results of this study are contained in this document. The recommendations, once they are adopted regionally, will be certified by the governor and EPA Administrator. The alternative recommended in the 201 Facility Plan should then conform to the Water Quality Management Plan recommendations.

In addition to this study, 208 funds could be used to help to implement nonpoint source management resulting in enhancing, restoring or protecting recreation and open space uses. Award of these funds is made on a competitive basis.

TABLE 3

Multiple-Use Funding Sources
by

Massachusetts Department of Environmental Quality Engineering
208 Water Quality Management Program
April, 1980

STATE PROGRAMS

AGENCY	PROGRAM	FY'80 FUNDING for MA.	APPLICATION DEADLINE	FINAL DATE FUNDING DECISION MADE	PROJECT LENGTH ALLOWED (in years)	% LOCAL SHARE	REIMBURSE-MENT PROGRAM	CAN OTHER FEDERAL OR STATE FUNDS BE USED AS AS A MATCH?	AGENCY CONTACT IN MASS.
Massachusetts EOEA Divs. of Conservation Services	Self-help Program	$1,684,724 for '80 $600,000 for '81 May be new bond issue	August 31	October 1	Varies	50%	Yes	Yes, LWCF for an additional 25%	Joel Lerner Div. of Conservation Services 100 Cambridge St., 21st Fl. Boston, Ma. 02202 (617) 727-1552
	Urban Self-Help Program (cities with pop. greater than 35,000).	2.5 M, 0 for '81 (may be new bond issue)	August 31	October 1	Varies	20% (not less than)	Yes	Yes, LWCF for an additional 10%.	Same as above

FEDERAL PROGRAMS

USDI Heritage Conservation & Recreation Service	Land & Water Conservation Fund (LWCF)	7.725 M-1980 3.6 M-1981	August 31	October 1 (sometimes later)	(3 year maximum)	5	Yes (sometimes acquisitions can be advanced)	EDA, CDBG	Same
	Historic Preservation Fund	Survey & Planning 700,000 Acquisition & Devel. 600,000	June 13, _____ April 30	Following annual appropriation January _____ Jan. - March	Survey & Planning 6-12 Months Acquisition & Devel. 1 year	50% minimum	Yes	Revenue Sharing CDBG Any non-federal state or local	Lee Gurney Mass. Historical Commission 294 Washington St. Boston, Ma. (617)727-8470
	Urban Park & Recreation Recovery Program	125 M (Nationwide)	3 cycles Nov., Feb., June	60-90 days from filing	No more than 3 construction seasons. Generally 1 yr. (varies)	With State match, Fed. share increases dollar for dollar 30%	Yes	State-DCA-Community Affair Grants CDBG Gen. Revenue Sharing	Mass. Dept. of Environmental Management 100 Cambridge St. Boston, Mass. 02202 (617)727-4704

C-1

TABLE 3 (CONTINUED)

FEDERAL PROGRAMS (CONTINUED)

AGENCY	PROGRAM	FY'80	APPLICATION DEADLINE	FINAL DATE FUNDING DECISION MADE	PROJECT LENGTH ALLOWED (in years)	& LOCAL SHARE	REIMBURSE-MENT PROGRAM	CAN OTHER FEDERAL OR STATE FUNDS BE USED AS A MATCH?	AGENCY CONTACT IN MASS.
HUD	Community Development Block Grants	Metro.- 14.6 M Non-Metro.- 6.75 M	3 yr. plan required or 1 yr. competitive discretionary funds.	Issued by HUD, normally once per year. October 1980	Discretionary funds normally on yearly basis.	None required	Varies	Can be used as a match for LWCF money	Sheldon Gilbert HUD 15 New Chardon St. Boston, Ma. 02202 (617)223-4184
	701 Comprehensive Plan-Planning Aasistance Program	1.55 M	Varies with agency using funds from HUD	Varies	1 year	33.3 %	No	No	Same
USDA Farmer's Home Admin. (Fm HA)	Recreation Loans to Farmers	92,000 ($200,000 per loan)	Varies	Varies	Intermediate loans 1-7 yrs. long term: loans up to 40 years.	Loans with interest rate determined July 1. Loans at 5% interest	Interest rate varies periodically currently 12%	NA	Robert Pratt Chief, Farmer Programs USDA Fm HA 451 West St. Amherst, Ma 01002 (413) 253-3471)
	Resource Conservation & Development Loans (limited to Berkahire, Franklin, Dubes, Bristorl. Plymouth, Nantucket and Barnstable Counties)	Funding available but use limited as interest rates rise (upper limit $500,000)	Variea	Varies	Up to 40 yrs	Currently 7.21% interest	NA	Loans are for public & local non-profit organizations	Buen Anderson District Director PO Box 455 Sunderland Ma01375 (413) 665-2603 Berkshire & Franklin counties Richard Lavoie District Director 160 MacArthur Park Blvd. Revere Ma. 02532 (617) 754-9321 other counties
	Community Facilities loans (towns with population less than 10,000)	Funds generally always available but somewhat limited	Varies	Varies	Up to 40 yrs	5% interest on unpaid principal	NA	Loans to public or quasi-public non-profit organizations	Brian Anderson (Berkshire LPV, Franklin, Central Mass. RPA's Richard Lavoie (all other RPA's)
	Waste loans and grants (towns with population less than (10,000)	Loans generally available but grants are very limited	Varies	Varies	Up to 40 yrs	5% interest on unpaid principal	NA	Loans to public or quasi-public non-profit organizations	Same as above

TABLE 3 (CONTINUED)

FEDERAL PROGRAMS (CONTINUED)

AGENCY	PROGRAM	FY'80	APPLICATION DEADLINE	FINAL DATE FUNDING DECISION MADE	PROJECT LENGTH ALLOWED (in years)	% LOCAL SHARE	REIMBURSE-MENT PROGRAM	CAN OTHER FEDERAL OR STATE FUNDS BE USED AS A MATCH?	AGENCY CONTACT IN MASS.
	Watershed Protection & Flood Prevention	Funding available, but use limited as interest rates rise (upper limit $500,000)	Varies	Varies	Up to 40 yrs.	Currently 7.21% interest	NA	Loans are for public & local non-profit organizations	Same as above
Soil Conservation Service	Berkshire Franklin Resource Conservation & Development	125,000	Varies	Varies	Essentially no limit	50% plus all O & M	NO	Loan assistance for local share	Jeffrey Aulikes RC&D Coordinator Amherst Rd. P.O. Box 408 Sunderland Ma. 01375 (413) 665-7040
	Pilgrim Area Resource Conservation & Development	125,000	Varies	Varies	Essentially no limit	50% plus all O & M	NO	Loan assistance for local share	August I. Reese RC&D Coordinator 2510 Cranberry Highway Wareham Ma. 02571 (617) 295-9202
	Watershed Protection & Flood Prevention	1.03 M	Varies	Varies	Essentially no limit	Varies depending upon purpose of the measure	NO	Yes and long term credit is also available for local share through the Fm HA	Phil Christenson Asst.State Conservationist 451 West St. Amherst, Ma. 01002 (413) 256-0441
Department of Commerce	Economic Development Administration	No budget yet	Round III of Public Works-not authorized yet			20%			William Fitzhenry E.O.A. 441 Stuart St. Boston, Ma. 02116 (617) 223-6468
	Coastal Zone Management Community Assistance Grants Program	$320,000	December	April	1 year	20%	No	State and local funds or in kind contributions	Rich Thibedeau Mass. CZM 100 Cambridge St. Boston, Ma. 02202 (617) 727-9530
	Coastal Zone Management Coastal Energy Impact Program	Loans-32M Grants-600,000	August May	Varies	Loans-up to 30 yrs. Grants-1 yr.	20%	No	State funds	John Shortsleeve Mass. CZM 100 Cambridge St. Boston, Ma. 02202 (617) 727-9530

TABLE 3 (Continued)

FEDERAL PROGRAM (CONTINUED)

AGENCY	PROGRAM	FY'80	APPLICATION DEADLINE	FINAL DATE FUNDING DECISION MADE	PROJECT LENGTH ALLOWED (In years)	% LOCAL SHARE	REIMBURSEMENT PROGRAM	CAN OTHER FEDERAL OR STATE FUNDS BE USED AS A MATCH?	AGENCY CONTACT IN MASS.
Federal Highway Administration	Pedestrian & bicycle facilities	Cumulative bonding funds; currently 3M	Varies	Varies	Varies	25% (cash or in-kind)	Yes	No	Patrick Lynch Bureau of Transportation Planning & Devel. 150 Causeway St. Boston, Ma 02114 (617) 727-5124
Department of the Treasury	General Revenue Sharing	Funding depends on community characteristics	NA	NA	Annually	None	No	Yes	Mass. Revenue Dept. 100 Cambridge St. Boston, Ma. 02202 (617) 727-4233
U.S. Army Corps of Engineers	Federal Water Project Recreation Act. (Note: if associated with Corps project	No limit	No deadline	No deadline	As contracted	50% of non-separable costs plus O. & M. (either cash or in-kind services) e.g. land)	No	CDBG, any non-federal public agency	Charles Freeman U.S. Army Corps 424 Trapelo Rd. Waltham, Ma.02154 (617) 894-2400, Ext. 347
U.S. Fish & Wildlife Service	Pittman Robertson Program Federal Aid to (Wildlife) Note: F&W State projects only) and Dingell Johnson Program Federal Aid to(Fisheries) (Note: state projects only)	Maximum amount for both programs is $700,000 but don't have enough state share.	On going	No deadline	No limit	25% supplied by state (75% federal and 25% state)	Yes 75% to state Fish and Game	State agency could transfer 100% money to State Fish & Game fund and then State Div. of Fisheries & Wildlife would build and then reimburse the 75%	Paul Mugford Mass. Div. Fisheries & Wildlife 100 Cambridge St. Boston, Ma 02202 (617) 727-3151
Department of Labor	C.E.T.A.	$174 Million	Varies with local agency	Varies with local agency	Usually 1 year	None Non-federal share waived in FY'79 and FY'80	No		John Rose Dept. of Labor, Employment & Training Administration JFK Federal Bldg. Boston, Ma. 02203 (617) 223-7380
U.S. Community Services Administration	Summer Youth Recreation Program	$135,570	April 21	30 days	June 1- Sept. 30	30-40% from approved Community Action Agencies	No		Laurence Fay Community Services Admin. JFK Federal Bldg.Boston,Ma. 02203 (617) 223-0975

TABLE 3 (CONTINUED)

FEDERAL PROGRAMS (CONTINUED)

AGENCY	PROGRAM	FY'80	APPLICATION DEADLINE	FINAL DATE FUNDING DECISION MADE	PROJECT LENGTH ALLOWED (in years)	& LOCAL SHARE	REIMBURSE-MENT PROGRAM	CAN OTHER FEDERAL OR STATE FUNDS BE USED AS A MATCH?	AGENCY CON-TACT IN MASS.
Department of Health, Education & Welfare	Environmental Education	Not funded in FY'80. '81 funding unlikely	Varies	Usually 45 days after application deadline	3 years	25% in 3rd yr.	No	NA	Roland Perry Office of Education, HEW Room 2403 JFK Federal Building Boston, Mass. 02203 (617) 223-7227
	Older Americans Act (senior centers)	Available under Title 3B Varies by planning and service area	Varies, but generally no later than June 15	Not before October 1	Varies, but generally 1 year	25% in 1980 (⅓ of above must be public resources)	No	Yes CDBG, General Revenue Sharing, state	Emmett Schmarsow Dept. of Elder Affairs 110 Tremont St Boston, Ma. 02108 (617) 727-7009

Under the 201 construction grants program the current EPA and Division of Water Pollution Control policy in funding multiple-purpose projects which include recreation is to fund at the level of the most cost-effective single-purpose pollution control project. Costs associated with the design and construction of the recreational components are not eligible for construction grants money. These costs have to be borne by the grantee in addition to their share of the water pollution control project.

The cost of the single-purpose pollution control project should include the cost of normal restoration of the site to near original conditions in the case of an interceptor and to aesthetically blend the site and structures into the landscape in the case of a pumping station or treatment plant. For interceptors the types of planting would differ in fields, forests, wetlands and developed areas. Special provisions are made for erosion prone river banks. Access for maintenance and barriers preventing unauthorized access are also included. For treatment plants and pump stations, normal restoration would include similar access provisions, fencing for security and a buffer zone as well as any trees or shrubbery deemed appropriate. EPA and DWPC review all plans prior to approval to ensure that site restoration is adequate.

In addition to normal site restoration under EPA's 201 program, a variety of mitigation costs have been ruled eligible project costs in Federal project history. Under the Fish and Wildlife Coordination Act, for example, a Federal project must bear the cost of acquiring and developing substitute habitat to offset that destroyed or impaired by the project. The National Environmental Policy Act also provides a statutary basis for mitigation expenditures to offset the full spectrum of potential environmental damages.

Only the Recreation and Open Space planning costs are eligible for 201 funding. Design and construction costs beyond normal site restoration are not grant eligible under steps 2 and 3. However, if a Grantee is able to incorporate a viable multiple purpose use in conjunction with the recommended treatment system's construction then funding for the recreational purpose will be eligible up to the allowable cost for restoration of the site for the wastewater system.

For example, for the interceptor system along the Merrimack River in Lowell, Massachusetts described in Chapter 1, an alternative bidding procedure was used to enhance the recreational opportunity in conjunction with the proposed wastewater system. One alternative was to entirely riprap the river bank along the interceptor. The other alternative substituted a paved surface for one half of the 20 foot wide riprap shelf and included a simple balustrade railing. Both alternatives were bid at the same price. The bikeway/walkway alternative is being built and will provide numerous recreational benefits to the City of Lowell.

Should a multiple purpose option be bid at a higher price, the cost over and above the cost of the wastewater system alternative alone will have to be borne by the affected community and/or through an available recreational grant.

To be eligible for these funds, the proposed recreation project must be part of a certified areawide water quality management plan, and must be consistent with the plan's recommended means for improving water quality.

State Funding Sources

2. Executive Office of Environmental Affairs

A. Massachusetts Self-Help Program

Administered by the Division of Conservation Services (DCS) in the State's Executive Office of Environmental Affairs, this program offers towns and cities with conservation commissions up to 50 percent reimbursement for the cost of land purchased or developed for conservation or passive outdoor recreation. HCRS's Land and Water Conservation Fund (described below) and DCS Self-Help Program may be applied together. In that case, a community may receive up to 75 percent reimbursement for the cost of purchasing land.

B. Urban Self-Help Program

Similar to the program described above, this program provides reimbursement funds for conservation and recreation projects, with an emphasis on aiding large cities. It will provide up to 80 percent reimbursement for cities with population above 35,000.

Federal Funding Programs

3. Department of the Interior Heritage Conservation and Recreation Service

The Heritage Conservation and Recreation Service is responsible for nationwide outdoor recreation planning, technical interagency coordination, and allied fuctions associated with the provision of recreation experiences. Major funding programs are the Land and Water Conservation Fund, Urban Park and Recreation Recovery Program, and Historic Preservation Fund.

A. Land and Water Conservation Fund (LWCF)

LWCF provides grants of up to 50 percent for the planning, acquisition, and development of public outdoor recreation areas and facilities. Available funds are apportioned to each state on the basis of relative population and other factors. Specific projects approved for funding are usually identified at the State level. An approved Statewide Comprehensive Outdoor Recreation Plan (SCORP) is required for state eligibility.

An unfortunate aspect of LWCF is that it is a reimbursable grant program requiring local communities to provide the initial funding for acquisition and/or development projects (unless a land donation is involved). This has made the pursuit of multiple use difficult for many communities.

B. Historic Preservation Fund

Under the Historic Preservation Act (Public Law 89-665) as amended, 50 percent matching grants are available to states for preparing comprehensive statewide historic surveys and plans, and for the acquisition, preservation and development (by state and local governments) of districts, sites, buildings, structures and objects significant in American history, architecture, archeology, and culture at the national, state, and local levels.

C. Urban Park and Recreation Recovery Program

The National Parks and Recreation Act of 1978 authorizes funds for rehabilitation of existing public park and recreation sites and facilities in urban areas. The program authorizes a 70/30 federal/local grants program for such purposes. Innovative projects are encouraged and special funding is provided for this purpose. The program is intended to compliment the Land and Water Conservation Fund (LWCF) and other potential sources of federal and state aid.

4. Department of Housing and Urban Development (HUD)

The Office of Community Planning and Development is responsible for the Community Development Block Grant Assistance and Comprehensive Planning Assistance programs. It is also responsible for activities concerning project review, relocation, enhancement of environmental quality, urban design, rehabilitation loans and grants, growth and development study, and urban program coordination.

A. Community Block Development Grants

Community Development Block Grants, authorized by the Housing and Community Development Act of 1974, can cover up to 100 percent of the project costs. The funds may be used to assist in (1) the acquisition of real property for preservation or restoration of historic sites, urban beautification, conservation of open space, natural resources or scenic areas provision of recreation, or the guidance of urban development; (2) the construction or installation of public works and facilities, including recreation centers and facilities, senior centers, and historic properties. To be eligible for a block grant, the applicant must provide a summary of a three-year plan identifying community needs and methods to meet those needs. Community Development Block Grant monies can also be used as the local match for Land and Water Conservation Fund (LWCF) money.

B. 701 Comprehensive Planning Assistance Program

The Comprehensive Planning Assistance Program, popularly called the "701" Program of which recreation planning is one phase, funds such activities as continuous community planning and management, improved executive planning, decision-making, and management capabilities by state, local and regional officials. It also funds plans developed by planning organizations. The matching formula for 701 funds is 66.6 percent federal, 33.3 percent local.

3. Department of Agriculture Farmers Home Administration

The Farmers Home Administration (FmHA) provides credit for those in rural areas who are unable to obtain credit from other sources at reasonable rates and terms. The agency operates principally under the Consolidated Farm and Rural Development Act of 1921, and Title V of the Housing Act of 1949, as amended.

A. Recreation Loans to Farmers

The Farmers Home Administration (FmHA) makes loans to assist eligible farmers in boosting their incomes by converting all or portions of their farms and ranches to income-producing outdoor recreation enterprises.

Recreation loans may be used to develop land and water resources; repair and construct buildings; buy land, equipment, livestock, and other recreation items and pay necessary operating expenses.

Intermediate-term loans up to $50,000 may be made to finance recreation equipment and operating expenses. The interest rates on these loans are determined each July 1. Repayments are scheduled over one to seven years; in some cases loans may be renewed for up to five years.

Long-term loans are also available. A farmer may borrow up to $100,000 from FmHA with maximum terms of 40 years. The interest rate is five percent per year on the unpaid principal. In addition, the farmer can borrow a portion of the credit he needs from other long-term credit sources at rates and terms established by the other lender, provided the total debts against the farmer do not exceed $225,000 or the market value of the security, whichever is less.

Additional FmHA loan programs available for recreation/open space projects include:

B. Resource Conservation and Development Loans are available for public agencies and local nonprofit corporations in authorized Resource Conservation and Development (RC&D) areas for up to $250,000. Development of facilities for rural community public outdoor-oriented water-based recreation is a fundable use.

C. Community Facility Loans are available, for up to 40 years, to public or quasi-public nonprofit organizations serving the public in rural areas or towns of less than 10,000 population. Construction, enlargement, or improvement of community facilities, including those which offer social, cultural, health, or recreation benefits are fundable uses.

D. Waste Loans and Grants are available under the same conditions as community facility loans and are used for the construction of wastewater treatment facilities.

E. Watershed Protection and Flood Prevention loans are available for public agencies and nonprofit organizations. These may be used in conjunction with the SCS program described below.

4. Department of Agriculture Soil Conservation Service

The Soil Conservation Service (SCS) has responsibility for developing and implementing a national soil and water conservation program in cooperation with landowners, community planning agencies, regional resource groups, and other agencies of federal, state, and local governments. There are two major SCS programs which provide financial assistance for recreation purposes.

A. Resource Conservation and Development (Public Law 87-703, as amended) Financial assistance is available from SCS for the planning and installation of approved measures specified in RC&D area plans serving purposes such as public water based recreation, flood prevention, sedimentation and erosion control, fish and wildlife developments, agricultural water management purposes, rural community water supply and quality management, control and abatement of agriculture-related pollution, disposal of solid wastes, and rural fire protection. Financial assistance may be available for up to 50 percent of the cost of land rights acquisition and for 50 percent of the construction costs of recreation structures. In addition, they must provide for operation and maintenance and all needed water rights. Loan assistance may be provided for the local share of these costs.

B. Watershed Protection and Flood Protection (Public Law 83-566) SCS provides financial assistance in planning and implementing works of improvement to protect, develop, and utilize the land and water resources in small watersheds. Assistance is provided in sharing costs of public waterbased recreation, fish and wildlife management, flood protection, irrigation, drainage, and sedimentation control. Long-term credit is available to help local interests with their share of the costs.

Funding is allowable up to 50 percent for public recreation purposes. Project sponsors can borrow money under authority of the act to finance their share of construction costs.

5. Department of Commerce

A. Economic Development Administration

The Economic Development Administration (EDA), as authorized by the Public Works and Economic Development Act of 1965 as amended, may provide loans and grants for the construction of public works facilities, including public tourism facilities. The project must fulfill a pressing economic development need of the area. Up to 80 percent of the project costs can be met with grant monies.

B. National Oceanic and Atmospheric Administration Office of Coastal Zone Management

The Coastal Zone Management Act of 1972, as amended, authorizes the Office of Coastal Zone Management to provide planning and implementation grants to coastal states and territories to develop and carry out state coastal zone management programs. The purpose of these grants are sufficiently broad to encompass recreation purposes. One of the primary goals of the CZM act is to increase access to the coastal zone.

C. Coastal Zone Management Coastal Energy Impact Program

This program provides funds to offset impacts of coastal energy development. Coastal recreation areas can be funded as replacements for areas in harbors and ports used for energy related facilities.

6. Federal Highway Administration

The FHA recognizes the public's need to travel on foot or by non-motorized vehicle and permits the use of Federal-aid Highway funds to construct pedestrian and bicycle facilities. These may be constructed not only as added features of highway construction projects, but as separate projects where it can be shown that the facility will divert pedestrian or bike traffic that would normally use the Federal-aid roadway. The funding ratio is generally 70 - 30 federal to non-federal money. In qualifying for these funds, the project must compete with conventional highway projects.

7. Department of the Treasury: General Revenue Sharing

General revenue sharing is a form of financial assistance available to all general purpose units of government under authority of the State and Local Fiscal Assistance Act, as amended. The Act provides that State and local governments may spend Federal funds for any purpose which is considered a permissable use of the State or local government's own revenues under applicable law. In most cases recipient governments may spend revenue sharing funds for the State or local contribution to another Federal program requiring a State/local match.

8. U.S. Army Corps of Engineers: Federal Water Project Recreation Act

The Federal Water Project Recreation Act of 1965 (Public Law 89-72) made outdoor recreation a consideration in all federal navigation, flood control, reclamation, and hydroelectric resource projects. Up to 50 percent of all project costs may be allocated to recreation and fish and wildlife enhancement. The Corps will pay all of the non-separable first costs of recreation facility construction and 50 percent of the separable costs. Recreation facilities may also be added to completed Corps or Bureau of Reclamation projects if a non-federal public agency agrees to pay at least 50 percent of the installation costs and to assume operation and maintenance responsibilities.

9. U.S. Fish and Wildlife Service

U.S. Fish and Wildlife administers the Pitman-Robertson Program, which provides grants covering up to 70 percent of the costs of (1) restoration or management of wildlife populations and the preservation and improvement of habitat for non-game species, endangered species, hunting, and other use of the resources; (2) providing facilities and services for conducting a hunter safety program. The grants are available only to state fish and game departments. The Dingell-Johnson Program provides similar funding for projects designed to restore and manage sport fishing populations for the preservation and improvement of sport fishing. These grants may be used for land acquisition, development, research, and coordination.

10. Department of Labor

The Employment and Training Administration (ETA) is authorized under the Comprehensive Employment and Training Act (CETA), as amended, to provide funds for several categories of workers potentially useful in parks and recreation settings. These include:

- Funds for summer youth programs to provide employment in public works projects, including community conservation and improvement projects.

- Temporary public service employment for unemployed or under-employed persons.

- Young Adult Conservation Corps to carry out work projects on federal or non-federal public lands or waters.

Where an agency or local government has office space and the capability to administer a grant, this program may permit the hiring of a full time director to oversee and coordinate the multiple use project.

11. Community Service Administration

The CSA's Community Action Program seeks to mobilize and channel the resources of private and public organizations and institutions into anti-poverty action, to stimulate more effective approaches to the solution of poverty programs, and to strengthen communications and mutual understanding between individuals and institutions.

Project grants supplied by CSA may be applied, among other uses, to youth development programs and recreational projects. The grants are made to approved Community Action Agencies and vary in size from 60 to 70 percent of the project cost. The Summer Youth Recreation Program provides financial support for staff and logistical services to enhance recreation opportunities for selected populations.

12. Department of Health, Education and Welfare (HEW)

The Department of Health, Education and Welfare has two programs that can be of assistance in the park and recreation field.

A. Environmental Education

Funds are available from the Office of Education for programs to develop effective environmental education practices and materials. This includes demonstration and pilot projects designed to educate the public on problems.

B. Older American Act

As amended, authorizes grant of up to 75% of the project expenses to state and localities to acquire, alter, or renovate existing facilities to serve as multi-purpose centers for senior citizens. Recreation is an allowable service.

13. Private Funding Sources

In some instances, lands and funds for recreational purposes can be obtained from private sources. These include foundations, trusts, and individual and corporate landowners. The private donation of land (or of a public use easement of the land) can serve as a tax benefit to the donor and can significantly reduce acquisition costs to the community. These tax benefits extend not only to individual property owners, but to industrial and commercial holders as well. Since in many cases the landowner's right to develop the land was surrendered previously for purposes of constructing and maintaining the sewer facility (interceptor, force main, etc.), the remaining value may be relatively small. This, coupled with the prospect of reduced taxes, may be sufficient incentive for some property owners to permit public use of the land or to transfer ownership to the community.

Land donation occurred recently in several New Jersey communities, where three properties were acquired for purposes of establishing the Towpath Trail. One trail segment was donated by a private residential property owner, a second by a semi-public institution. The third public use easement was deeded to the local community as part of the subdivision process when several building lots were created from a larger tract of land.

With respect to financial contributions, there are numerous foundations which provide assistance to environmental and recreational projects of public benefit. A listing of these foundations can be found in the latest edition of The Foundation Directory, published by the Foundation Center, 888 Seventh Avenue, New York, New York 10019 (212) 489-8610.